



# Analysis of legislation related to disaster risk reduction in Nepal

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## About this report

This report was commissioned by the IFRC and prepared by Mary Picard, legal consultant. It is one of several case studies the IFRC is undertaking to learn about how legislation can support (or impede) disaster risk reduction, particularly at the community level. For more information about the project and various case studies as they become available, please visit our website at <http://www.ifrc.org/idrl>.

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# Analysis of legislation related to disaster risk reduction in Nepal

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# Executive summary

The geology, topography and tropical location of Nepal means that the country is faced with frequent natural hazards or risks that can lead to disasters causing displacement, loss of life, property and livelihoods. These include the annual monsoonal rains, frequent forest fires and a level of seismic activity that could lead to a major earthquake at any time. These natural occurrences and risks are in turn exacerbated by environmental degradation, deforestation and soil erosion, leading to a greater likelihood of devastating flash floods and landslides, while glacial melt associated with climate change has increased the risk of glacial lake outburst floods.

Nepal remains in a period of political transition following a decade of armed conflict, a peace settlement in 2006 and ongoing negotiations by an interim legislature-parliament over a new Constitution. The outcomes of this process may profoundly alter the structure of government by moving to a federal system of autonomous provinces, replacing the present system of national government, which has administrative/electoral regions, districts and local governments. The immediate impact for disaster risk reduction (DRR) is that legislative reform processes have slowed and become less clear, as has the process for implementation of new policy. In addition, the absence of district and local elections over the last decade has weakened those levels of government from the perspective of formal community participation in DRR.

Despite these difficulties, however, the Government of Nepal has this year adopted a National Strategy for Disaster Risk Management (NSDRM) and has just announced that a revised draft Bill for a new Disaster Management Act (DMA) will soon go to Cabinet and be made publicly available. This is the final stage preceding its arrival before the Legislature. It appears likely that the DMA will take a very broad approach to disaster management and establish new coordinating mechanisms at all levels, as outlined below.

One of the broad conclusions of this report is that it is important to take a wide view of DRR law and regulation in Nepal, so that many elements of what may be termed 'good governance' towards planned and sustainable development are an integral part of the legal framework for DRR. Effective law and regulation to support DRR in Nepal needs to address some of the regulatory factors that cause or fail to prevent natural events becoming human disasters, using longer term planning and public regulation to help prevent loss of life and livelihoods which currently have a major impact on the country's human development. This necessary integration of DRR and development goals has been recognized at national Government level in Nepal in its national development planning, its National Policy on Environmental Adaptation to Climate Change, and

its National Strategy for Disaster Risk Management.<sup>1</sup> The principal challenges in this regard are carrying such integration into district and local government priority setting and implementation, and empowering communities to take an integrated approach.

The conclusions of this report highlight some of the main legal gaps, unused potential under existing laws, and good DRR practices that have evolved under or in response to the DRR legal framework in Nepal. These observations are based on the Findings of the study and are explained more fully in the report's Conclusions, but are here briefly summarized.

### Positive legal developments and good practices

Some of the good DRR practices enabled by the legal framework, or established to meet past gaps, are:

#### NSDRM

- The National Strategy for Disaster Risk Management (NSDRM), approved in 2009, is designed to dovetail with a new Disaster Management Act and appears to be widely accepted and supported at the national level. District governments have already established disaster management plans under this strategy and the next stage will be at local government level.
- An innovative form of international cooperation has been developed to prioritize and implement key elements of the NSDRM. This is the Nepal Risk Reduction Consortium (ADB, IFRC, UNDP, UNISDR, OCHA, World Bank) and its Flagship Programmes developed in consultation with the Government and other stakeholders.

#### Building regulation and earthquake risks

- There are a number of earthquake risk reduction projects implemented through the Department of Urban Development and Building Construction (DUDBC) with assistance especially from the UNDP/Earthquake Risk Reduction and Recovery Project (ERRRP) and National Society for Earthquake Technology – Nepal (NSET). These include projects to retrofit public schools, hospitals and other public buildings for earthquake resilience, public education on earthquake risk from buildings and training within municipalities and the building trades to encourage and enable correct implementation of the National Building Codes, especially for larger urban buildings.
- The DUDBC with NSET and UNDP/ERRRP has developed, distributed and provided training on the Mandatory Rules of Thumb (MRT), a set of voluntary guidelines in the National Building Codes intended for owner builders to construct earthquake and fire safe smaller buildings. The MRTs, pragmatically, recognize that, especially in rural areas, most owner builders do not generally have access to engineering advice (as 93 percent of buildings are non-engineered), and also stress that local materials should be used. This model could be replicated in other countries with similar patterns of non-engineered construction where full regulation does not yet exist.

<sup>1</sup> NSET, UNDP, and ECHO, 'NSDRM Draft 2008'; Nepal National Planning Commission, 'Three Years Interim Plan (2007-2010)', (Kathmandu: Nepal National Planning Commission, Government of Nepal: <http://www.npc.gov.np/en/plans-programs/detail.php?titleid=19>, 2008); NSET, UNDP, and ECHO, 'NSDRM Draft 2008'; 'National Adaptation Program of Action (NAPA) to Climate Change', (Kathmandu: Ministry of the Environment, Government of Nepal: <http://www.napanepal.gov.np>, 2010), 78.

## Executive summary

### Land use planning for safety

- The Ministry of Physical Planning and Works has implemented a system of voluntary 'land pooling' in the Kathmandu Valley, which compensates for a lack of prior land use planning overlays or reservation of public land for urban development. They reach agreements in which landowners who wish to create new urban developments sacrifice a portion of their private land in order to provide proper roads and other infrastructure, including public open space, with the return of an increase in the remaining land's value. Public safety is improved with good access for emergency vehicles, while the earthquake hazard from falling buildings is reduced by having wider streets and public open space for evacuation.

### Community based DRR

- As part of the prevailing model of community based DRR projects in Nepal, community based DRR committees are established in a way that represents all the interest groups in the community. A good practice that has emerged is that, at the end of these start-up projects, many DRR committees register as community based organizations – CBOs – at District level. This enhances community accountability for the management of revolving relief funds and other DRR decisions, assists in sustainability by making them less dependent on particular individuals, and allows these committees to access government assistance and to participate formally in local government DRR processes.

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## Gaps in the legal framework or its implementation

The main gaps in the legal and institutional framework for DRR in Nepal are:

### Disaster management legislation

- There is not yet a comprehensive and broadly based Disaster Management Act (DMA) in place, and the current Natural Calamity (Relief) Act 1982 focuses on rescue and response. However, at the time of writing the Government has announced that a Bill for the new DMA will soon go to Cabinet as the final step before going to the legislature. Based on prior information, this is likely to contribute to DRR in Nepal by establishing new and more broadly representative disaster management institutions at national, regional, district and local levels as follows:
  - A National Commission for Disaster Risk Management chaired by the Prime Minister;
  - A National Authority for Disaster Risk Management as the implementation authority;
  - Specialist committees on rescue and relief, preparedness and mitigation, resourced by the Ministries of Home Affairs (MoHA), Local Development (MoLD) and Physical Planning and Works (MoPPW), respectively; and
  - Regional, District and Local disaster management committees involved in both planning and implementation.

### **Building regulation and earthquake risks**

- There is not yet a comprehensive and/or adequately resourced mechanism to implement the National Building Codes to guard against the risks of earthquake and fire:
  - The Building Regulations under the Building Act do not yet establish a mechanism for approval of smaller buildings at local level, although these are covered in the Act itself.
  - The National Building Codes under the Building Act have been only partially implemented by a small number of municipalities, meaning that high-risk buildings continue to be constructed, including in the heavily populated and seismically active Kathmandu Valley. Even where implementation has commenced, however, no municipality has yet managed to implement the full cycle of building regulation by establishing (1) prior approval, (2) inspection and (3) enforcement/penalties.
  - There appears to be no legally mandated system for safety inspection of existing buildings for fire, earthquake or other risks.
  - As yet there is no system of assessment or incentives in place to retrofit private buildings for earthquake safety.

### **Land use planning and high-risk settlements**

- Land use planning is not clearly regulated and institutional responsibility for it is divided between the Ministry of Physical Planning and Works (MoPPW) and Municipal authorities, among others. New urban developments may occur without approval, and the lack of prior reservation of government land for roads and infrastructure means it is also difficult to ensure that planned developments meet general safety standards, as well as that they do not occur on land at a high risk from natural hazards. This is an especially high priority in the Kathmandu Valley.
- There is no consistent legal mechanism to relocate individuals or communities from high-risk land. This has been done in various ad hoc ways, primarily in response to particular disasters.

### **Early warning and DRR communications**

- There is not yet a specific legal or institutional framework for communication of impending disasters to and from communities. Relevant government entities which collect information or provide communications are not mandated to share information or support community DRR.

### **Civil society participation in DRR**

- Although the legal mechanism for the Welfare Council to register INGOs and coordinate their assistance (under the Social Welfare Act) is potentially very useful in coordinating DRR and other development projects in the national interest, this has in practice become a bottleneck in the administration of DRR projects.
- There is no mechanism for national registration of Nepali civil society organizations, meaning that technically they can only operate in the district of registration, which discourages the establishment of NGOs with a national focus in DRR.

## Executive summary

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### DRR potential of existing laws

Some of the existing legal mechanisms which have the potential to be better utilized for DRR are:

- The process of conducting environmental impact assessments (EIAs) for major projects under the environment protection legislation could be extended to incorporate DRR criteria.
- The legal mechanisms of community based forest and water management ‘user groups’ encourage conservation, sustainable exploitation, and hazard reduction. These could be incorporated into community based DRR to strengthen the legal basis and coordination of such projects.

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### Conclusion

While significant gaps in the DRR legal framework and its implementation remain, and legislation of the proposed new Disaster Management Act is clearly the first priority, the principal medium term challenge for a broad approach to DRR remains effective and coordinated implementation of each of the relevant legal and policy frameworks to the local and community level, and in a way that empowers and builds capacity in communities. The immediate challenge is to implement these measures in a period of political transition, and to move to a new system of implementation with full community participation to empower communities and create a sustainable approach to DRR.

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# Abbreviations

<b>ADB</b>	Asian Development Bank
<b>CBDRM</b>	Community Based Disaster Risk Management
<b>CBDRR</b>	Community Based Disaster Risk Reduction
<b>CBO</b>	Community Based Organization
<b>CDO</b>	Chief District Officer (MoHA)
<b>CDRC</b>	Central Disaster Relief Committee
<b>CNCRC</b>	Central Natural Calamity Relief Committee
<b>DADRM</b>	District Authority for Disaster Risk Management
<b>DDC</b>	District Development Committee
<b>DIPECHO</b>	Disaster Preparedness Programme, European Commission Humanitarian Aid Department
<b>DMA</b>	Disaster Management Act (Draft)
<b>DDRC</b>	District Disaster Relief Committee
<b>DFID</b>	Department for International Development, UK
<b>DNCRC</b>	District National Calamity Relief Committee
<b>DoLIDAR</b>	Department of Local Infrastructure Development and Agricultural Roads (MoLD)
<b>DPNet</b>	Disaster Preparedness Network – Nepal
<b>DRM</b>	Disaster Risk Management
<b>DRR</b>	Disaster Risk Reduction
<b>DUDBC</b>	Department of Urban Development and Building Construction (MoPPW)
<b>DWIDP</b>	Department of Water Induced Disaster Prevention
<b>ECHO</b>	European Commission Humanitarian Aid Department
<b>EIA</b>	Environmental Impact Assessment
<b>EOC</b>	Emergency Operations Centre
<b>ERRRP</b>	Earthquake Risk Reduction and Recovery Preparedness Programme
<b>EWS</b>	Early Warning System
<b>GEF</b>	Global Environment Facility
<b>GLOF</b>	Glacier Lake Outburst Flood
<b>GoN</b>	Government of Nepal
<b>HFA</b>	Hyogo Framework for Action 2005-2015

**Abbreviations**

<b>IFRC</b>	International Federation of Red Cross and Red Crescent Societies
<b>ICRC</b>	International Committee of the Red Cross
<b>IDRL</b>	International Disaster Response Laws, Rules and Principles
<b>INGO</b>	International Non-Government Organization
<b>ISDR</b>	International Strategy for Disaster Reduction, UN
<b>JICA</b>	Japan International Cooperation Agency
<b>LDO</b>	Local Development Officer (District Level, MoLD)
<b>LSGA</b>	Local Self-Governance Act
<b>MADRM</b>	Municipal Authority for Disaster Risk Management
<b>MOAC</b>	Ministry of Agriculture and Cooperatives
<b>MoHA</b>	Ministry of Home Affairs
<b>MoLD</b>	Ministry of Local Development
<b>MoE</b>	Ministry of the Environment
<b>MoPPW</b>	Ministry of Physical Planning and Works
<b>NADRM</b>	National Authority for Disaster Risk Management
<b>NAPA</b>	National Adaptation Program of Action on Climate Change
<b>NCDM</b>	Nepal Centre for Disaster Management
<b>NCDRM</b>	National Commission for Disaster Risk Management
<b>NGO</b>	Non-Governmental Organization
<b>NLC</b>	Nepal Law Commission
<b>NBC</b>	National Building Code of Nepal
<b>NPC</b>	National Planning Commission
<b>NRCS</b>	Nepal Red Cross Society
<b>NRRC</b>	Nepal Risk Reduction Consortium
<b>NSDRM</b>	National Strategy for Disaster Risk Management, Nepal
<b>NSET</b>	National Society for Earthquake Technology, Nepal
<b>OCHA</b>	UN Office for the Coordination of Humanitarian Affairs
<b>UNDP</b>	United Nations Development Programme
<b>UNESCO</b>	UN Economic, Scientific and Cultural Organization
<b>UN RC/HC</b>	United Nations Resident Coordinator / Humanitarian Coordinator
<b>VCA</b>	Vulnerability and Capacity Assessment
<b>VDC</b>	Village Development Committee and/or Village Development

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# Chapter 1

## Background

## Background to project

In 2005, states, development and humanitarian organizations, and other stakeholders adopted the Hyogo Framework for Action<sup>1</sup>, setting a series of priorities for global action to reduce disaster risk. The first of these priorities was to “ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation,” notably through the adoption of supportive legislation. Since then, a number of countries have adopted or begun to consider adopting new laws, policies and institutional arrangements for disaster risk reduction. Yet, as of 2009, participants at the Second Global Platform for Disaster Risk Reduction concluded that there was still “a pressing need to build institutions, including legal frameworks, to sustain disaster risk reduction action as an ongoing concern,” and noted that “several countries stressed the need for technical assistance, to help grow their capacities.” While a great deal of information and resources have been developed to share best practices about DRR generally, specific information about what legislation can (and cannot) accomplish has remained limited.

In response, the International Federation of Red Cross and Red Crescent Societies (IFRC) is undertaking a series of case studies to examine the strengths and perceived gaps in the current laws of disaster-prone countries whose governments, National Societies and civil society organizations are active in the field of risk reduction. The Nepal case study presented in this report is part of this series.

The case studies focus in particular on how existing legislation can lead to concrete results at the community level, for example through fostering community participation, supporting education, ensuring implementation of building codes and land management rules and facilitating the work of community-based institutions. The case studies are not designed to be exhaustive or prescriptive. Instead, through a brief period of research and consultations, they aim to illustrate some of the best practices and outstanding issues. In 2010-11, at least 5 case studies are being carried out in various parts of the world. Nepal was chosen, in collaboration with the Nepal Red Cross Society, as one of the first case study subjects.

The key research questions addressed in this study can be summarised as follows:

- What are the most important laws, regulations, rules and policies of Nepal relevant to disaster risk reduction (DRR) (e.g. disaster management laws, building and land management codes, environmental protection rules, flood and fire management laws)?
- To what degree is the impact of these laws concretely felt at the community level?
- As currently implemented, do existing laws:
  - provide adequate incentives and disincentives toward reducing disaster risks?
  - encourage community information, education and participation in disaster risk reduction?
  - promote community involvement in decision-making?
  - facilitate the work of community-based organizations?
- What are some of the best practices that might be shared with other countries?

<sup>1</sup> ‘Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (Extract from the Final Report of the World Conference on Disaster Reduction)’, World Conference on Disaster Reduction. 18-22 January 2005, Kobe, Hyogo, Japan (Kobe, Hyogo, Japan: International Strategy for Disaster Reduction, United Nations, 2005).

- Are there any outstanding issues or gaps in the legal framework for DRR in Nepal, or in its implementation?

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## Methodology

The study project period was a total of 6 weeks, including initial desk research on Nepal's laws related to disaster risk reduction, in-country consultations with relevant stakeholders, and report drafting. Given the short timeframe, it could not attempt to be a comprehensive study of all the legal and institutional framework of relevance to disaster risk reduction (DRR) in Nepal, but rather an overview of the legal framework with some specific examples, focusing as much as possible on community level implementation. The primary legal research was based on translated legislation publicly available from the Nepal Law Commission.<sup>2</sup> Also consulted were recent national strategy and policy documents, and a range of community based DRR project reports, as well as international reports and risk analyses concerning DRR in Nepal, as a means to place the legal analysis in the context of DRR initiatives and disaster management in Nepal.

The project researcher, Mary Picard, visited Nepal from 14 – 26 November 2010 for in-country consultations, which were invaluable in identifying which elements of the legal framework were particularly pertinent, as well as in providing information on the practical workings of institutional structures, on implementation of the laws and regulations, and on proposals for reform. She met with government officials at the national and local levels, Red Cross movement representatives, UN agencies, NGOs, donors and civil society and community representatives. It was not possible to meet with all major national and international actors during such a short visit, and it should therefore be understood that the absence of an organisation from this list – notably some key donors and INGOs – may simply mean their representatives were not available in Kathmandu at the relevant time. The meetings were conducted as discussions focusing on disaster risks, DRR practices, and legal issues relevant to each person or group, rather than as structured interviews. Discussions and statements made during such meetings have not been directly quoted, yet conversations have been referenced where these were main sources of information on legal or relevant factual issues concerning DRR. The list of meetings and community visits is found in Annex A.

In terms of Nepal's governing entities, meetings were held with officials in the key national ministries/departments relevant to DRR, with officials in two municipal governments in the Kathmandu Valley – Kathmandu Metropolitan City, and Lalitpur – and also with officials at district level in the Chitwan District (south central Nepal).

Community visits were undertaken in several communities where disaster risk reduction projects have been undertaken, to report on how existing laws have helped in supporting risk reduction activities and to establish where improvements might still be needed. These included Nepal Red Cross Society DRR training projects in the urban communities of Lalitpur and Kirtipur, in the Kathmandu Valley, where the emphasis was on earthquake preparedness. They also included visits to five rural village communities in the Chitwan District, hosted by the Chitwan District Chapter of the NRCS and its community sub-chapters, in the Madi area between Chitwan National Park and the Indian border. Here the focus was on flood risks from the Rawa, Chandra and

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<sup>2</sup> A statutory independent body created by the Nepal Law Commissions Act 2007. Website: <http://www.lawcommission.gov.np/>

## Background

Badarmudhe rivers. These communities were part of rural Village Development Council areas (VDCs) and the village locations were as follows:

- Chandrapuri village (Gardi VDC, Ward No 1)
- Amiliya village (Gardi VDC, Ward No. 1)
- Bagauda VDC
- Ramrajyapur village (Kalyanpur VDC, Ward No.2 )
- Jagatpur Red Cross village (Jagatpur VDC, ward No. 1)

Flood-related legal issues facing these communities are used as examples in the Findings section of this report.

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# **Chapter 2**

## Overview of the disaster risk profile of Nepal

## Overview of the disaster risk profile of Nepal

Nepal is a small mountainous country located in South Asia, which shares borders with India and China. With an area of 147, 181 square kilometres, it extends 885 kilometres from east to west and 145 to 241 kilometres from north to south. In terms of physical geography, the country is usually described as being divided into three geographical regions, forming three bands across the territory – the Himalayan mountains, the Hill country, and the Plain (Terai). The Himalayan region covers 15% of the total area, the hills 68% and the Terai 17%. Although small in extension, the fertile Terai is referred to as the food basket of Nepal, and around 50% of the total population lives there. The total estimated population of Nepal is about 26 million.<sup>3</sup>

The geology, topography and tropical location of Nepal means that the country is faced with frequent natural hazards or risks that can lead to disasters causing displacement, loss of life, property and livelihoods. These include the annual monsoonal rains, frequent forest fires and a level of seismic activity that could lead to a major earthquake at any time. These natural occurrences and risks are in turn exacerbated by environmental degradation, deforestation and soil erosion, leading to a greater likelihood of devastating flash floods and landslides, while glacial melt associated with climate change has increased the risk of glacial lake outburst floods (GLOFS). In addition, urban buildings and infrastructure are generally not earthquake resilient and, especially in the Kathmandu metropolitan area, narrow streets and a lack of open space present a challenge for emergency access and evacuation in the event of a major earthquake and/or fire.

Table 1 indicates the full range and types of natural and human-induced hazards Nepal faces. However, due to the limited scope of the present study, this report does not further consider epidemics, but focuses on natural hazards, albeit often presenting a human-induced element, such as fire and soil erosion.

Table 1: Types of natural and human-induced hazards in Nepal

Types of Hazard	Prevalence
<b>Natural Hazards</b>	
Earthquake	All of Nepal is a high-hazard earthquake zone
Flood	Terai (sheet flood), Middle Hills
Landslide and landslide dam breaks	Hills, Mountains
Debris Flow	Hills and Mountain, severe in areas of elevations greater than 1700 m that are covered by glacial deposits of previous ice-age
Glacier Lakes Outburst Floods (GLOF)	Origin at the tongue of glaciers in Higher Himalayas, Higher Mountains, flow reach down to middle Hill regions
Avalanche	Higher Himalayas

<sup>3</sup> Nepal Red Cross Society and IFRC, 'Legal Preparedness Study for Strengthening Legal and Policy Framework for International Disaster Response in Nepal (Draft)', (Kathmandu: Nepal Red Cross Society, The International Federation of Red Cross and Red Crescent Societies, 2010), 46 at 7.

Types of Hazard	Prevalence
Fire (forest )	Hills and Terai (forest belt at foot of southern-most Hills)
Drought	All over the country
Storms/ Hailstorm	Hills
<b>Human-Induced Hazards</b>	
Epidemics	Terai and Hills, also in lower parts of Mountain region
Fire (settlements)	Mostly in Terai, also in mid-Hill region
Accidents	Urban areas, along road network
Industrial/Technological Hazards	Urban / industrial areas
Soil erosion	Hill region
Social Disruptions	Follows disaster-affected areas and politically disturbed areas

Data from Nepal Country Report: ISDR Global Assessment Report on Poverty and Disaster Risk 2009, UNDP-ISDR, NSET (2010), Table 3.

Since 1980, floods and mass movement of wet land (avalanches and landslides) respectively accounted for the vast majority of deaths and persons affected by natural disasters in Nepal. Moreover, without taking into consideration epidemics, the 1988 earthquake in the eastern regions – which caused over 700 deaths and affected around 300,000 people – was the next major cause of loss of life and disruption in the country.<sup>4</sup>

## Earthquakes

Most of the territory of Nepal is an active seismic zone, experiencing low-level tremors on a regular basis, although these are often not perceptible to people. Kathmandu Valley experienced a massive earthquake in 1934 which measured 8.3 on the Richter scale, damaged around 60% of buildings and caused casualties of more than 4,000 people (in a population of only 300 thousand).<sup>5</sup> The earthquake in eastern Nepal in 1988 caused comparatively extensive death and destruction for a quake that measured only 6.5 on the Richter scale.<sup>6</sup>

The main human hazard from earthquakes is the built environment: 80% of the risk of death in an earthquake comes from the buildings, while 9-10% of deaths are from lack of medical response and 8-9% from lack of emergency response systems.<sup>7</sup> Risk reduction is therefore focused on (a) effective evacuation, which requires evacuation plans, training / capacity-building, and open spaces, and, (b) the construction or retro-

<sup>4</sup> Prevention Web, Nepal – Disaster Statistics, at <http://www.preventionweb.net/english/countries/statistics/?cid=121> (consulted 10 November 2010).

<sup>5</sup> JICA figures cited in Kathmandu City information pamphlet, 'Kathmandu Metropolitan City at a glance'.

<sup>6</sup> Government of Nepal Ministry of Home Affairs (MoHA) and Disaster Preparedness Network -Nepal (DPNet), 'Nepal Disaster Report 2009 : The Hazardscape and Vulnerability', (Kathmandu: MoHA, DPNet – Nepal, with support from ECHO, UNDP Nepal, Oxfam Nepal, 2009).

<sup>7</sup> Conversation with Mr. Amod Mani Dixit, Nepal Society for Earthquake Technology (NSET).

fitting of earthquake-resilient buildings to increase their resistance vis-à-vis the most severe shaking, and to ensure that the manner of collapse does not further endanger the lives of those inside or outside the buildings. The target for earthquake resistance of private buildings is the ability to withstand a shaking level of 9 on the MSK Scale (which measures shaking at a given point) to allow evacuation, and, if damaged, to be able to be rebuilt by local efforts even in the absence of insurance. However in spite of such target 93% of buildings in Nepal are described as 'non-engineered', that is, built without architectural and engineering advice.<sup>8</sup> Many of these in rural areas are small single-storey dwellings made from light materials such as bamboo frames with clay plaster and roof thatch. Yet especially in urban areas – where population growth has increased congestion and land prices have risen – there are now many multi-storey homes, residential apartments, and high-rise commercial buildings (in particular in the Kathmandu Valley) which constitute an even greater source of danger. Most of these are in fact made of reinforced concrete and masonry (bricks), but the quality of building materials and construction techniques vary considerably – indeed, such buildings are often neither engineered nor based on approved plans or inspected for compliance. There are many different estimates of the impact of an earthquake in the Kathmandu Valley of a similar magnitude to the great earthquake of 1934 (8.3 Richter scale), but the consensus seems to be that a large portion of Kathmandu City's structure would collapse, including 50% of hospitals and critical lifelines. Moreover, it is estimated that more than 40,000 people would be killed, many more injured, and an even larger number left homeless.<sup>9</sup> Although this risk is very real, it is impossible to predict exactly when such an event will occur, and it is also difficult to motivate ordinary people to make safe construction a priority (when it is more expensive and enforcement is weak) and to conduct training and capacity-building that is sustainable for many years in the absence of a major earthquake.

Enforcement of the National Building Codes to ensure earthquake resilience for new private construction remains a major challenge for local government, while retrofitting of existing private buildings has simply not begun. Programmes for retrofitting of public hospitals and schools have progressed further, but so far only a very small proportion of government schools have been made earthquake resilient, while private schools have not been included in such programmes.<sup>10</sup>

## Floods, landslides and glacial lake outburst floods (GLOF)

Floods and rain-related landslides occur regularly in Nepal, caused by the combination of monsoonal rainfall and unstable mountain topography with changes arising from human activity, including deforestation of water catchments and de-vegetation of river banks. Flash floods and landslides occur in the mountains and hill country, while topsoil is washed downstream and riverbeds become silted, causing spreading floods and water logging in the plains. Floods and landslides account for the largest loss of life and livelihoods of all the natural phenomena that regularly affect Nepal, and claimed on average about 211 lives annually between 1998 and 2008.<sup>11</sup> These hazards are the focus of many community based disaster risk reduction programs, and arguably the frequency of these events makes it easier to sustain community awareness

<sup>8</sup> Dixit, NSET.

<sup>9</sup> NSET, UNDP, and ECHO, 'National Strategy for Disaster Risk Management in Nepal', (2008) at 3.

<sup>10</sup> Conversation with Mr Amrit Man Tuladhar, DUDBC, currently seconded to the UNDP/ERRRP Project.

<sup>11</sup> NSET, UNDP, and ECHO, 'NSDRM Draft 2008'.

and capacity for both response and risk reduction. Strategies vary depending on local conditions, yet community early warning systems – together with relocation schemes for at-risk communities, the construction of safe refuge shelters and riverbank mitigation structures, and the limited use of bio-engineering for the replanting of unstable areas – are an increasingly focus.<sup>12</sup>

Glacial Lake Outburst Floods (GLOFS) are a specific type of flash flood, identified as an increasing risk to mountain communities in Nepal.<sup>13</sup> The risk is due to glacial melt into lakes that are naturally dammed with ice and rubble (glacial moraine), and the nature of the hazard is a sudden outburst flood. The International Centre for Integrated Mountain Development (ICIMOD)<sup>14</sup> has identified twenty-two glacial lakes in Nepal that are at risk of GLOF events in the next 5-10 years. For the most part the lakes themselves are located above the level of permanent settlements (over 4,000 meters altitude), so that the risk is to communities living downstream. Due to the high cost of damming the lakes, the focus is now on early warning systems for downstream communities, to protect lives through evacuation.<sup>15</sup>

## Fires

Wildfires in forests (from both human and natural causes) and urban fires are both significant hazards. In 2009 fire incidents affected 608 families in 23 districts, claiming 14 lives, injuring 48 persons, and destroying 569 houses.<sup>16</sup> Fire incidents have been a regular threat in Nepal due to unplanned urban cluster settlements and the use of thatched roofs in rural areas. Anecdotal evidence from consultations during this project suggests that the incidence of urban fires has dropped dramatically in recent years, since people began using bottled gas for cooking rather than open fires. However, there are also very few trained fire brigades, a severe lack of modern fire trucks which can access the narrow lanes or reach multi-storey buildings, and a low level of preparedness and response capacity for large fire incidents. This is a particular concern in highly urbanized areas such as the Kathmandu Valley.<sup>17</sup>

## Hazards, capacity and vulnerability – DRR in context

Despite the challenges of climate, geography, poverty and armed conflict, Nepal has made progress on disaster risk management in the last decade. Several initiatives in disaster risk management implemented by the Red Cross movement in Nepal, Nepali NGOs, INGOs and UN agencies have been regarded as successful cases and replicated in other countries of the region and the world. Some examples of such initiatives are:

- <sup>12</sup> Dhruva Raj Gautum, 'Community-Based Disaster Risk Reduction Good Practice: Kailali Disaster Risk Reduction Initiatives', (Lalitpur, Nepal: Disaster Preparedness Programme of the Europeans Commission's Humanitarian Aid Department (DIPECHO), Mercy Corps Nepal, Nepal Red Cross Society Kailali, 2009) at 13.
- <sup>13</sup> Britta Horstmann, 'Glacial Lake Outburst Floods in Nepal and Switzerland: New Threats Due to Climate Change', (Bonn: Germanwatch, 2004) at 3.
- <sup>14</sup> Samjwal Ratna Bajracharya, 'Glaciers, Glacial Lakes and Glacial Lake Outburst Floods in Nepal', (International Centre for Integrated Mountain Development – ICIMOD, 2009).
- <sup>15</sup> Conversation with Jorgen Kristensen, Danish Red Cross, Nepal.
- <sup>16</sup> NRCS and IFRC, 'Legal Preparedness Study for Strengthening Legal and Policy Framework for International Disaster Response in Nepal (Draft)', (Kathmandu: Nepal Red Cross Society, The International Federation of Red Cross and Red Crescent Societies, 2010), 46., citing Nepal Cross Society Disaster Management Department Situation Report April 2010.
- <sup>17</sup> Conversations with: Mr. George Murray, OCHA Nepal; Mr Ganesh Rai, Kathmandu Metropolitan City; and Mr Prabin Shrestha, Lalitpur Sub-Metropolitan City Office.

earthquake risk assessment, implementation of school level earthquake risk management programmes, community-based local and district level disaster planning and preparedness, emergency response to high altitude hazardous events such as snow avalanches in the Mt. Everest region, community-based disaster management,<sup>18</sup> and the innovative form of cooperation pioneered by the Nepal Risk Reduction Consortium's 'Flagship Programmes' on DRR, discussed further below.<sup>19</sup> In particular, the model of community-based disaster risk reduction (CBDRR) – relating to multiple hazards, including floods, landslides and earthquakes – recently implemented in a number of communities in Nepal, has many elements that can be used in other countries. More recently, these non-government initiatives have been accompanied by national policy formulation and proposed new disaster management legislation, although these processes are in the early stages of implementation.

Disaster Risk Reduction (DRR) initiatives in Nepal – and especially those aspects related to environmental management and earthquake resilience – face the constant challenge of the country's relative poverty and the increasing competition for resources for economic development, at both the national and local level. The country's GDP is small in comparison to global data and the IMF estimated that per capita share of national GDP in 2010, based on global purchasing power parity, was only around NPR 21,628.095 (or approximately USD 310 per year).<sup>20</sup> In the UNDP Human Development Report 2010, which uses human development indicators based on both economic and social factors such as health and education, Nepal was ranked in the low human development category and positioned at number 138 out of 169 countries and areas. Nepal was, however, ranked first in terms of human development indicators (HDI) improvement over the last thirty years, a measure of progress in comparison with other countries with a similar initial level.<sup>21</sup> It is not surprising, however, that for the National Planning Commission of Nepal, poverty reduction is the main priority.<sup>22</sup> In this context, the establishment and implementation of DRR laws and regulations needs to be linked, legally and conceptually, to development and poverty reduction in Nepal. In this sense it is particularly important to take a broad view of DRR law and regulation, moving outside the notion of a 'disaster cycle', so that many elements of what may be termed 'good governance' towards sustainable development could be seen as an integral part of DRR in Nepal. These include such measures as land use planning and prevention of environmental degradation, preparation for the possibility of more extreme climatic events arising from climate change in the future, and urban planning and regulation of building and infrastructure construction that recognize the high risk of earthquake. In this sense 'disaster risk reduction' is a much broader concept than 'disaster management'. Effective law and regulation to support DRR in Nepal therefore needs to address some of the regulatory factors that cause or fail to prevent natural events becoming human disasters, using longer term planning and public regulation to help prevent loss of life and livelihoods which currently have a major impact on the

<sup>18</sup> UN Nepal Information Platform -

<http://www.un.org.np/resources/disastermanagement.php> (accessed 11 Nov 2010)

<sup>19</sup> Nepal Risk Reduction Consortium, 'Disaster Risk Reduction in Nepal Flagship Programmes', (Kathmandu: ADB, IFRC, UNDP, UNISDR, OCHA, World Bank, 2010).

<sup>20</sup> The International Monetary Fund's 2009 list places Nepal's GDP at 106<sup>th</sup> in the world. Country statistics source 2010: International Monetary Fund, Data and Statistics, Report for Nepal, at <http://www.imf.org> (accessed 10 December 2010).

<sup>21</sup> United Nations Development Program – UNDP 'Explanation Note on 2010 HDR Composite Indices, Nepal: Explaining HDI Value and Rank Changes in Human Development Report 2010', (2010).

<sup>22</sup> Conversation with Mr. Reshmi Raj Pandey, Nepal National Planning Commission.

country's human development. This necessary integration of DRR and development goals has been recognized at national Government level in Nepal in its national development planning, its National Policy on Environmental Adaptation to Climate Change, and its National Strategy on Disaster Risk Management.<sup>23</sup> The principal challenge in this regard is carrying such integration into district and local government priority setting and implementation.

<sup>23</sup> NSET, UNDP, and ECHO, 'NSDRM Draft 2008'.; Nepal National Planning Commission, 'Three Years Interim Plan (2007-2010)', (Kathmandu: Nepal National Planning Commission, Government of Nepal: <http://www.npc.gov.np/en/plans-programs/detail.php?titleid=19>, 2008); NSET, UNDP, and ECHO, 'NSDRM Draft 2008'; 'National Adaptation Program of Action (NAPA) to Climate Change', (Kathmandu: Ministry of the Environment, Government of Nepal: <http://www.napanepal.gov.np>, 2010), 78.

Analysis of legislation related to disaster risk reduction in Nepal

## **Chapter 3**

# Legislative framework for disaster risk reduction

## Legislative and governance structure

Nepal has a relatively comprehensive body of legislation, developed over many years.<sup>24</sup> Its national laws regulate a range of matters relevant to disaster risk reduction (DRR), from the specific National Calamity (Relief) Act 2039 (1982) on disaster response, to laws relating to building and construction, land use planning, environmental protection, water and forest management.<sup>25</sup> It also has a legally mandated system of devolved decision-making and local governance, which is central to DRR implementation. However, a discussion of Nepal's current legislative framework for DRR needs to consider two major factors. The first is the current process of political transition, which impacts law making and implementation, and may also result in fundamental changes to governance structures in the near future. The second is the overall structure of national and local governance in Nepal as it stands today, which provides the context for understanding how DRR laws and regulations are implemented.

The first issue impacting DRR laws is that Nepal remains in a period of political transition. Following the internal conflict and signing of the 2006 Comprehensive Peace Accords, the Nepal Interim Constitution 2063 (2007) was agreed, and in April 2008 elections were held for a national Constituent Assembly and Nepal became a republic. The Constituent Assembly – or legislature-parliament as it is often called – acts both as a national legislature and as the body to negotiate a permanent Constitution. Its term was extended by a further year from May 2010 when agreement had not been reached on the new Constitution. One of the large questions being considered is the division of Nepal into autonomous provinces and how it would then operate as a federation, which would impact considerably on the current legislative framework and the form of regional or local governance. The more immediate impact of this transitional phase, however, has been that the progress of some mooted legislative and policy reforms has been delayed. One such legislative proposal, discussed further below, is for a new Disaster Management Act, focused on holistic disaster management rather than the rescue and recovery focus of the current National Calamity (Relief) Act. The interim nature of the current national government has also affected budgetary allocations and longer-term policy implementation, including with respect to DRR, at both the national and local levels. Nevertheless, some legislative reforms continue to be achieved – for example, amendments to improve compliance with the National Building Act, in early 2010 – and important policy commitments are being made, including the recent approval of the National Strategy for Disaster Risk Management (NSDRM). Concerning DRR, Government ministries, departments, district and local officials are working with the Red Cross movement in Nepal and a number of national and international NGOs, UN agencies and international donors to implement DRR policy and programmes, and in particular a number of community based disaster risk reduction projects.

The second contextual issue when considering the national legislative framework for DRR is the current structure of local government. The national legislature-parliament has the primary law-making function, and government ministries and departments constitute an extensive permanent civil service at national level. Some of these have 'line' functions from the national level to District level – for example, the Ministry of Home Affairs, the Ministry of Local Development and the Department of Soil Conservation And Water Management within the Ministry of Forest and

<sup>24</sup> Now mostly available online in English translation as well as in Nepali, through the Nepal Law Commission website: <http://www.lawcommission.gov.np/>

<sup>25</sup> A list of the most relevant legislation is provided in Annex C.

Soil Conservation – while others have a policy role. However, under the Local Self-Governance Act 1999, local authorities may also exercise considerable autonomy in making local by-laws and administrative decisions, including exploitation of local natural resources.

For administrative purposes Nepal is formally divided into 5 development Regions (Far West, Midwest, West, Central, and East) incorporating 14 zones. However, for most purposes it appears that the more local levels of government administration have greater implementation functions, especially concerning disaster management and environmental management. These are the 75 Districts and, at the next level, the local government structures which are designated differently for urban and rural areas. The local governments in urban areas are Municipalities, and there are a total of 58 Municipalities in Nepal (53 outside Kathmandu and 5 within the greater metropolitan area of Kathmandu, including the Metropolitan City itself and 4 Sub-Metropolitan Cities). The local government structure in rural areas is the Village Development Area – albeit more commonly known as a VDC after ‘Village Development Council’ and/or ‘Village Development Committee’ as defined in the legislation – and there are more than 3,000 of these across the country.<sup>26</sup> Each VDC or Municipality, in turn, includes a number of smaller communities, known as ‘wards’, which are the smallest administrative unit. Each VDC is composed of nine wards and in municipalities, the number of wards ranges from nine to 35, depending on population.

Under the Local Self-Governance Act the administrative divisions are also the electorates for democratically elected governing bodies at the levels of Ward, VDC/ Municipality, and District. However, due to the prolonged conflict in Nepal, local government elections have not been held for more than a decade. As a consequence, while the administrative divisions at local level remain important, local government is administered by civil servants rather than being governed by elected councils and committees. One consequence of this, especially relevant for community based disaster risk reduction (CBDRR) in remote areas, is that there is sometimes no actual government presence at VDC level, as the relevant officials are based in the District office. This also means that there may be no obvious mechanism to resolve local government issues within a VDC area, including questions such as river management and flood mitigation measures, if the relevant communities cannot agree. This does not prevent successful CBDRR projects as such, and many have been achieved, including in remote areas with no effective VDC presence, through close cooperation with District level officials and engineers. While current laws do not prevent such projects, the issues that sometimes arise also highlight a gap in legal regulation, in that once a DRR issue extends beyond a small community, there does not appear to be a ready means to resolve conflicts over different approaches, or indeed to take a district or regional approach to a hazard affecting one community which has causes further afield. Some of these legal gaps could potentially be filled using existing environment and planning laws for defined geographical areas, such as certain water catchments, forests or river systems whose degradation contributes to flooding and landslides.

<sup>26</sup> Under the Local Self-Governance Act, the VD Council is the broader representative body and the VD Committee is the implementing executive body, although in the absence of elections the distinction is not currently relevant.

## National disaster management and risk reduction law and policy

Although the Natural Calamity Relief Act 1982 is the principal legislation relating to disaster management, the picture of current legal and institutional developments on DRR in Nepal is incomplete without also addressing the proposed new Disaster Management Act and the already-approved National Strategy for Disaster Risk Management in Nepal (NSDRM). In addition, an innovative form of international cooperation, the Nepal Risk Reduction Consortium – usually referred to as “the Flagship Programme” – is taking a lead role in supporting the Government in the implementation of the NSDRM, and thus is also discussed.<sup>27</sup> Finally, the legal framework for community based disaster risk reduction (CBDRR) projects is considered, in particular the approval mechanism for INGOs and projects in which they are involved.

### Natural Calamity Relief Act 1982

The Natural Calamity Relief Act 2039 (1982), as amended to 1992, is the main legal instrument specifically directed towards disaster management in Nepal. Its focus is on response and reconstruction. The Government has recognized that it does not provide a sufficiently comprehensive platform for implementation of national DRR strategies, in particular the newly approved National Strategy for Disaster Risk Management in Nepal (NSDRM). However, until replaced by a proposed new Disaster Management Act (discussed below) it remains the principal framework for disaster response and for a limited range of DRR activities within the scope of rescue, recovery and reconstruction.

The Natural Calamity Relief Act provides for the Government of Nepal to declare areas which are, or are likely to be, affected by disaster (“disaster area”). Declarations are published in the Nepal Gazette and are valid for a specified period, which can be extended. Within a declared disaster area, the Government has wide-ranging powers to order “anyone concerned” to assist in the rescue and relief effort, and to undertake activities such as: the closing of private and public offices and institutions; the evacuation of people and goods; measures to protect people, property and buildings; the establishment and deployment of aid groups; and the use of government resources. The Government is also empowered to requisition property, transport, food, clothing, medicine and other materials from any entity or individual if these are required for the relief effort (with due compensation at the prevailing rate).<sup>28</sup> These emergency powers are a key element in risk reduction during disasters, by removing people and property from harm’s way and commandeering the necessary resources to provide rescue and relief. At an administrative level, these activities are coordinated by the Ministry of Home Affairs (MoHA), especially through its District level officers, the Chief District Officers (CDOs), who, during the emergency stage, have the power to coordinate all the actors at District level, including the army and police, other government personnel and private actors.

The Act also provides for a tiered structure of Natural Calamity Relief Committees. The peak committee, the Central Natural Calamity Relief Committee, is chaired by the Minister of Home Affairs (s.5). The Central Committee is made up of 22 representatives of Government ministries, departments and services, as well as the Nepal Red Cross Society, the Nepal Scouts and two “reputed persons” nominated by the Government.

<sup>27</sup> Nepal Risk Reduction Consortium, ‘Disaster Risk Reduction in Nepal Flagship Programmes’, (Kathmandu: ADB, IFRC, UNDP, UNISDR, OCHA, World Bank, 2010).

<sup>28</sup> This summary draws on Annex 4 of: NRCS and IFRC, ‘Legal Preparedness Study IDRL Nepal 2010’, at 40.

During a disaster, a Member of Parliament representing the district affected by the disaster is also invited to attend the meetings. The Central Committee is responsible for developing national prevention, preparedness, relief and rehabilitation policies for submission to the Government, and is also responsible for their implementation, once approved. The Central Committee can also give directions to the District and Local Committees on matters of relief work.<sup>29</sup>

The Regional and District Natural Calamity Relief Committees form the next two tiers of the disaster management structure. Their functions are primarily to coordinate between the tiers below them, and to develop policy on disaster relief relevant to their own level (s. 7a and 9). In practice, however, it appears that the District Natural Calamity Relief Committees (DNCRCs) – or at least the district level of government administration in the absence of elected bodies – play the key role in coordination. The Local Natural Calamity Relief Committees (LNCRCs) are then at the operational end of the disaster management structure, conducting assessments (information submitted to the District Committee), organizing volunteers, evacuating those at risk and those injured, and distributing assistance in cash and kind. The Act also provides that, based on local assessments, the Regional, District and Local Committees are allocated relief funds from the National Calamity Aid Fund to meet the needs of their own communities (s. 9a, s. 13). A relatively small portion of this money can be used by Local Committees for DRR purposes, to the extent that awareness-raising (s. 9a (f)) activities and reconstruction are important elements of DRR. However, its fundamental purpose is for disaster relief and reconstruction, and funds remaining after the designated period must be remitted to the District Committee (s. 9a (g)).

### Proposed New Disaster Management Act (DMA)

A draft Disaster Management Act (DMA) was prepared in 2008, coordinated by the Nepal Centre for Disaster Management with assistance from Oxfam, on the basis of extensive stakeholder consultations.<sup>30</sup> A revised draft Act has recently been cleared by the Ministry of Law and Justice and will soon go to Cabinet. The new text is not available at the time of writing; however, as it is understood to have undergone substantive changes, the original 2008 draft (Nepali only) has not been relied upon for the present report. Instead, this discussion is based on interviews with informants and on the National Strategy for Disaster Risk Management (NSDRM) approved by the Executive Government this year, which contains a description of a proposed institutional structure for the new Act, noted in parenthesis below. It is not yet clear which model will be preferred for disaster management at district and local levels, but it is understood that the broad framework for the proposed Act may have the following characteristics:<sup>31</sup>

- A national level disaster management commission chaired by the Prime Minister, which would include representatives from all the different Ministries with responsibilities in disaster management (the NSDRM proposes a National Commission for Disaster Risk Management – NCDRM);
- A national disaster management authority, which would be responsible for implementation (the NSDRM proposes a National Authority for Disaster Risk Management – NADRM); and

<sup>29</sup> NRCS and IFRC, 'Legal Preparedness Study IDRL Nepal 2010'.

<sup>30</sup> Conversation with Dr Meen B. Poudyal Chhetri, DPNepal Nepal

<sup>31</sup> Conversation with Mr Shankar Prasad Koirala, Ministry of Home Affairs.

- Different high-level national committees for coordinating three main areas of operation, for which separate Ministries would have responsibility (this concept is not mentioned in the NSDRM):
  - a. Rescue and relief – Ministry of Home Affairs (MoHA)
  - b. Preparedness – Ministry of Local Development (MoLD)
  - c. Reconstruction – Ministry of Physical Planning and Works (MoPPW)

It is possible that this three-column structure will be continued at district and local levels, with three committees separating the roles of rescue and relief, preparedness, and reconstruction at each level. This is in contrast to the existing legislation, where the District Disaster Relief Committee – chaired by the Chief District Officer (CDO) from the Ministry of Home Affairs – coordinates all disaster management activities (although the NSDRM proposes single District Authorities for Disaster Risk Management – DADRM – and for the local level, a single Municipal Authority for Disaster Risk Management – MADRM, or the Village Development Committee – VDC).

Based on consultations for the present report there appears to be strong support for a new Act that would allow a broader approach and wider participation in disaster risk management and provide a strong legislative basis for implementation of the NSDRM. It is of course not possible to make detailed comments in the absence of a draft Bill. However, it is hoped that the new structure will enable the continued integration of other regulatory frameworks – outside the usual understandings of rescue & relief, preparedness and reconstruction – into Nepal’s approach to DRR, including such long-term hazard reduction strategies as enforcement of the building codes, land use planning and management of water catchments and river systems. If the three column structure is adopted at district and local level, this could present challenges in implementation of the new DMA, in that this could (a) tend to engender rivalry between the three specialist areas and (b) may not be practically possible at the local or even district level as, in smaller communities, the members of the three committees may well be the same people. For these reasons it would appear to be preferable under the new Act to instead establish multi-tasked and multi-skilled disaster risk management committees at the district and local levels, such as are envisaged in the NSDRM.

### National Strategy for Disaster Risk Management – NSDRM

The National Strategy for Disaster Risk Management in Nepal (NSDRM) was adopted by the Executive Government of Nepal in 2010.<sup>32</sup> It was drafted for the Government by the Nepal Society for Earthquake Technology (NSET) in 2008, through an extensive process of stakeholder consultations, with assistance from the European Commission and UNDP. It is a complex and large document containing a great deal more than a disaster management strategy, including substantial data on the risk profile of Nepal and a detailed analysis of the existing and proposed institutional and legal system for disaster risk management (partly described above, concerning the proposed new Act). In terms of its strategy components, it advocates strongly for:

- Integrating risk reduction concerns – safeguarding lives and livelihoods through disaster resilience, and developing the institutional and policy framework for holistic

<sup>32</sup> NSET, UNDP, and ECHO, ‘NSDRM Draft 2008’, at 23.

disaster management at all levels with the involvement of all stakeholders – with “the national goal of sustainable development and poverty reduction”;<sup>33</sup> and

- Protecting citizens from avoidable disaster – in recognition of their rights to a dignified life and livelihood – by not creating new risks during recovery/rehabilitation, being accountable to the disaster-affected communities, and being sensitive to issues of social justice, social inclusion and equality, including gender, ethnicity, people with disabilities, people in poverty and marginalized communities including Dalits.<sup>34</sup>

Based on these essential characteristics, the NSDRM outlines four key guiding principles for the Government of Nepal’s approach to disaster management, including: (1) incorporating the disaster risk management issues identified in the National Development plans;<sup>35</sup> (2) the inclusion of cross-cutting issues in planning and implementation (human rights, gender and social inclusion, decentralization and local self-governance, staff safety and security); (3) acceptance of a cluster approach to create sectoral working groups in line with the policy of the UN Inter-Agency Standing Committee approach; (4) and using the five key priorities in the Hyogo Framework for Action as logical steps towards achieving DRR.

In terms of implementation, the NSDRM then identifies a large number of priority actions within these five areas, but these are formulated in very broad terms, so that another more detailed level of prioritization and planning seems required for implementation, a process which has begun with assistance from the Nepal Risk Reduction Consortium (see below). Another useful aspect of the NSDRM as a resource for specific action planning is the attention to disaster management strategies in the different sectors, including: agriculture and food; health and nutrition; education; shelter, infrastructure and physical planning; livelihood protection; water and sanitation; information, communication and logistics; and search and rescue.

### Nepal Risk Reduction Consortium

In 2009 the Nepal Risk Reduction Consortium was formed to support the Government of Nepal in developing a long term Disaster Risk Reduction Action Plan building on the NSDRM. The members of the Consortium are the Asian Development Bank (ADB), the International Federation of the Red Cross and Red Crescent Societies (IFRC), United Nations Development Programme (UNDP), UN Office for the Coordination of Humanitarian Affairs (OCHA), UN International Strategy for Disaster Reduction (ISDR) and the World Bank. Based on Government priorities and discussions with multi stakeholder groups during 2009, the Consortium members and government identified five flagship areas of immediate action for disaster risk management in Nepal:

1. School and hospital safety- structural and non-structural aspects of making schools and hospitals earthquake resilient
2. Emergency preparedness and response capacity
3. Flood management in the Koshi river basin
4. Integrated community based disaster risk reduction/management
5. Policy/Institutional support for disaster risk management

<sup>33</sup> NSET, UNDP, and ECHO, ‘NSDRM Draft 2008’, at 23.

<sup>34</sup> NSET, UNDP, and ECHO, ‘NSDRM Draft 2008’, at 23.

<sup>35</sup> Nepal National Planning Commission, ‘Three Years Interim Plan (2007-2010)’. Chapter 26 concerns disaster risk management and the issue is incorporated into the discussion of different development sectors.

In developing these programmes, they considered the priorities outlined in the 'Hyogo Framework for Action 2005-2015, Building the Resilience of Nations and Communities to Disasters', and the Outcomes of the Global Platform for Disaster Risk Reduction. The estimated total budget of the three-year Flagship Programmes is US \$131.1 million, however, at this stage funding is still being sought for implementation. Each Flagship Programme has a designated lead agency. The fourth Flagship Programme – community based disaster risk reduction/management (CBDRR/M) – is the most relevant to the present study, and is led by the IFRC in Nepal. The approach outlined for CBDRR/M in the Consortium's 2010 update recognizes that the disaster risk management system in Nepal is currently undergoing changes from a relief based approach to proactive mitigation and adaptation measures, and it envisages institutional, legislative and policy change to support the decentralization of responsibility in support of engaging all stakeholders at national, district and village levels.<sup>36</sup> Its aim is that:

“Through this shift, local government and civil society will be empowered to develop capacity and build sustainable approaches to reducing disaster risk and consequently avoiding costly and external response interventions.”<sup>37</sup>

Of particular relevance to DRR laws and regulations, this programme area will address “the connection between national and local authorities in relation to resource allocation, planning, hazard mitigation and vulnerability reduction in partnership with a strong civil society.”<sup>38</sup> In line with the NSDRM it promotes the following to address priority needs in local level disaster risk management:

- enhancing local level risk assessment methodologies;
- improving the reliability and geographical coverage of community based early warning systems;
- scaling up of community based preparedness and mitigation actions;
- developing community capacity for engaging in local level risk reduction action; and
- undertaking vulnerability reduction measures.

These priorities are already reflected in the basic model of community based disaster risk reduction (CBDRR) projects being undertaken by the NRCS with support from the Danish Red Cross, the Finnish Red Cross and the IFRC, as well as joint projects with and by INGOs including Mercy Corps, Oxfam and others.<sup>39</sup> These are based on the recognized value of capable and empowered community based organizations (CBOs) and National Red Cross and Red Crescent societies around the world as a ‘key driver to building community safety and resilience to disaster and risk.’<sup>40</sup> However, as is evident from the Flagship Programme objectives, the current legal and institutional framework presents some challenges for widespread and sustained CBDRR programmes in Nepal, as opposed to separate community projects.

<sup>36</sup> Nepal Risk Reduction Consortium, ‘DRR in Nepal Flagship Programmes’.

<sup>37</sup> Nepal Risk Reduction Consortium, ‘DRR in Nepal Flagship Programmes’, at 2.

<sup>38</sup> Nepal Risk Reduction Consortium, ‘DRR in Nepal Flagship Programmes’, at 2.

<sup>39</sup> Meeting with NRCS Disaster Management team and Marko Korhonen. Finnish RC Nepal. Conversations with: Victoria Bannon IFRC Nepal; Jorgen Kristensen, Danish RC Nepal; Ulla Dons, Mercy Corps Nepal; Sten Van Leuffel and Rajesh Dhungel, Oxfam GB-Nepal.

<sup>40</sup> Nepal Risk Reduction Consortium, ‘DRR in Nepal Flagship Programmes’, at 24.

## Legal Framework for Community Based Disaster Risk Reduction (CBDRR) Projects

For DRR projects and overall DRR planning outside the context of an actual disaster, the most relevant governmental structures are the District and local government – Municipality or Village Development Council (VDC). At the District level, the main body is designated as the District Development Council or Committee (DDC), intended as an elected body established under the Local Self-Governance Act.<sup>41</sup> However, in the absence of elected committees, the main representative of the DDC is the Local Development Officer (LDO), who is an officer of the Ministry of Local Development but is responsible to the district rather than national level government.

Many Community Based Disaster Risk Reduction (CBDRR) projects are being implemented in Nepal, and the resources for these are often a combination of government revenues or technical support and cooperation (national, district or local), special project funds and technical support from national and international non-government sources (Nepali NGOs, INGOS, the NRCS and other National Societies), UN agencies and intergovernmental donors, and – importantly for sustainability – community-based revolving funds generated by cash and kind donations from within the community and managed by community based committees.

Although implementation of CBDRR projects is primarily very local, to the level of a specific community within a Ward of a VDC, the process for approval of such projects is a little more complex when international agencies are involved. In order to operate in Nepal, INGOs are firstly required to become affiliated with the Social Welfare Council, which issues certificates under the provisions of the Social Welfare Act 2049 (1992).<sup>42</sup> The Council is a statutory authority mandated to coordinate non-government organizations working in social welfare roles (s.5), to administer a social welfare fund, and to liaise with foreign governments and organizations conducting such activities (s.9). In this capacity it also has a role in specifically approving and monitoring individual projects, including small community-based DRR projects, if INGOs are involved in providing economic assistance (s.16), even when the projects are based on cooperation with local NGOs/CBOs, local government or the local Chapter of the NRCS.<sup>43</sup> This mechanism has the potential to be very useful in coordination of DRR and other development projects in the national interest. However, in practice, the current resource levels and processes of the Welfare Council mean that it has become a bottleneck in the administration of DRR projects. This is an example of where the legal framework is potentially useful but in practice creates a barrier to community based and other DRR projects and programmes in Nepal when these are funded or supported by INGOs and external donors.

National NGOs or community-based organizations (CBOs), on the other hand, register with the District government, in the Office of the Chief District Officer, who is an official

<sup>41</sup> The Local Self-Governance Act provides for elected District Development Councils and also for District Development Committees, which are intended to meet more frequently and act as executive committees to the Councils. As these have not been elected, the term DDC is used generally to refer to the District level development office. The same type of structure is mandated at Village level, where currently the term VDC is used to refer both to the village development area and the local government office, rather than to an elected Council or Committee.

<sup>42</sup> Other international agencies such as intergovernmental bodies, the UN agencies, the IFRC and the ICRC, either have their own status agreements or their relations are regulated by treaty, which are not part of this regulatory framework for INGOs.

<sup>43</sup> Although no pre-permission is required for projects by international institutions established under international agreements relating to emergency relief services – s. 16(4).

of the national Ministry of Home Affairs (primarily responsible for law and order, albeit with special powers during a declared disaster). This registration takes place under the Associations Registration Act, 2034 (1977). In theory such NGOs or CBOs are then authorized to operate only in the district of registration. In practice, however, it seems to be accepted that, in the absence of a system of national registration, NGOs which have a national DRR focus are allowed to operate in other districts. Nevertheless, the lack of a legal framework for national registration of Nepali NGOs/CBOs remains a legal gap.

Registration of Community Based Disaster Risk Reduction Committees (CBDRRCs) as local associations – or CBOs – under the Associations Registration Act, is also a mechanism to help ensure sustainability of such projects after the period of capacity building and seed funding which characterizes the predominant model of CBDRR adopted by the NRCS and major INGOs in Nepal.<sup>44</sup> This is in part because they may then access local and district development funds, but also for reasons of community accountability, as discussed further in the findings. Establishment of local DRR committees as registered CBOs has emerged as good practice in Nepal, as it is relatively easy to do, it increases community accountability and it promotes sustainability of community based DRR by providing an ongoing institutional structure which can also receive government funds and participate formally in local government processes.

### Other laws relevant to DRR

As noted above, there are also other sectoral laws and institutions of particular relevance to DRR in Nepal. It has become increasingly clear during the research for this study that, while broadly based disaster management legislation is essential for effective DRR within the 'disaster management cycle', such legislation alone is not a sufficient to establish an effective basis for DRR in the medium to long term. Other core laws of good governance need to be in place and implemented to prevent the creation of new hazards through human activity in the natural environment and also in the built environment, as well as to mitigate the potential effects of climate change. In Nepal, relevant laws concerning human impacts on the natural environment include: water catchment protection to prevent erosion and landslides; river management to prevent human activities that exacerbate flooding and to manage mitigation measures for the whole river or river system; and forest management to prevent fires as well as erosion that can exacerbate landslides and floods. In the urban or built environment, the necessary background laws to stop the creation of new hazards should include land use planning overlays to ensure that new urban developments do not occur on land at high risk of natural hazards and that they have adequate space for roads and other infrastructure, for access of emergency vehicles, and for public open space for earthquake evacuation. The absence of such laws represents a major gap in Nepal's urban DRR legal framework to date. But the other key area of legislation for Nepal, since its territory is seismically active, is effective building codes that guard against the construction of buildings that are not earthquake resistant and not fire-resistant.

Not all of the relevant laws can be listed here, but some of the other key laws and institutions identified are summarized below. The most important of these are the laws

<sup>44</sup> Nepal Red Cross Society, 'Community Based Disaster Risk Reduction Training Manual', (1st edn.; Kathmandu: Nepal Red Cross Society with the support of Danish Red Cross, 2010).

on building and construction, which are essential to earthquakes safety, as well as to general public safety, including fire risk.

### **Building and construction**

The Building Act, 2055 (1998), the Building Regulation 2009, and the National Building Codes are administered by the Department of Urban Development and Building Construction (DUDBC), located within the Ministry of Physical Planning and Works (MoPPW). The DUDBC's direct regulatory responsibilities extend only to public buildings, whereas District and local Municipal/VDC governments have the responsibility for implementation in private construction. There appears to be no specific law concerning the safety of current private buildings. This legislation must be implemented at local government level, and this is one of the major challenges facing Nepal in reducing the risk from earthquakes. Current progress and initiatives are discussed below under Findings.

There is also the Construction Business Act, 2055 (1999) and Construction Business Rules, 2056 (2000). This is essentially a licensing scheme for construction business entrepreneurs which is also intended to ensure qualified technical support. However, it appears that this regime is not used to any significant extent, as it was not mentioned by any of those consulted concerning the regulation of building and construction.

### **Environmental assessment and DRR**

The Environment Protection Act 1996, Environment Protection Rules 1997 and Environment Impact Assessment (EIA) Order, concern both broad environmental management and environmental impact assessment of proposals to carry out development work or physical activity that may bring about change in the existing environmental conditions or any plan, project or program which changes the land use. As the Ministry of the Environment does not have an implementation role, this is administered by the Ministry of Home Affairs (MoHA) and the Ministry of Local Development (MoLD) officials at District level. However, under the National Adaptation Programme of Action (NAPA) to Climate Change<sup>45</sup> the Ministry of the Environment could have a greater role in DRR through the mechanism of environmental impact assessments (EIAs).<sup>46</sup> The EIA Order concerns major developments. At present the EIAs do not relate specifically to DRR, but this system is relatively well established and has the potential to be modified to include DRR criteria as part of the environmental impact assessment.<sup>47</sup> The Act focuses on both environmental protection and sustainable development so that, even though it does not consider DRR as such, there is ample scope for the environmental aspects of DRR to be considered when assessing the potential impact of major projects. For example, if a project is to establish a commercial operation to extract rocks from a riverbed, it would be valid to consider the immediate and longer term effects of such extraction on erosion or the course of the river, and therefore the potential of this activity to exacerbate floods locally or downstream.

<sup>45</sup> 'National Adaptation Program of Action (NAPA) to Climate Change'.

<sup>46</sup> Conversation with Mr. Batu Krishna Uprety, Joint-Secretary Ministry of Environment

<sup>47</sup> Conversation with Mr. Batu Krishna Uprety, MoE.

### Forest management, deforestation and sustainable exploitation

The Forest Act, 2049 (1993) (as amended to 4 Feb 1999) provides for the designation of forests areas and the type of exploitation that can or cannot be carried out in each. An interesting model of sustainable forest exploitation/conservation is the designation of a “Community Forest” (s.25). Part of the National Forest is formally handed over to “user groups” for its development, protection and utilization in the common interest of the community. This includes exploitation of timber, fruits, and animals in a sustainable way. Although it is assigned as community property, it can also be taken back if it is not managed in accordance with the law. This Act is administered by the Ministry of Forest and Soil Conservation (MoFSC), Department of Forests, through the District government.

There is a slightly similar scheme under the National Parks and Wildlife Conservation Act, 1973, and in particular the Buffer Zone Management Rules, 2052 (1996). This Act is also administered by the MoFSC. Poaching and unofficial exploitation of forest products in National Parks is an ongoing issue in Nepal, although entry is prohibited to any person without a permit. This scheme provides for community participation in management of designated ‘buffer zones’ around National Parks (so designated by the National Government). These zones serve the dual purpose of designating an area which the nearby community can use for timber and forest products in a sustainable way, thus also decreasing their encroachment in the park. In some areas the buffer zone also helps to decrease the encroachment of wild animals from the National Parks into community farmland and settlements.<sup>48</sup> However, a Warden appointed by the Government controls the park itself and has formal responsibility for the buffer zone as well. The Warden may, but is not obliged, to form a community ‘User Committee’ to determine how the resources from the buffer zone will be exploited (Act s.16a) although the Buffer Zone Rules do seem to suggest this is normal practice (Rules s.8). Parts of a User Committee’s responsibilities under the Rules (s.10) are to conduct reforestation in its area, and to carry out programs to control floods, land slides, and soil erosion.

The legal framework providing for local user groups’ management of forest resources has broad conservation objectives, and also some specific DRR objectives in terms of flood and landslide prevention in national park buffer zones. These laws could be enhanced by including more specific DRR criteria. However, at least at the local level, forest user groups already provide a good legal model and a mechanism for communities to incorporate their own DRR plans into local environmental management. These mechanisms could be utilized specifically to enhance community level DRR projects in areas with community forests. They also represent a good practice and legal framework that can be replicated elsewhere.

### Water catchments and river management

Responsibilities regarding water management are divided between a number of laws and a number of Government Ministries, in addition to the specific roles of district and local development committees/government under the Local Self-Governance Act. The relevant Ministries include the Ministry of Irrigation, the Ministry of Agriculture and Co-Operatives, the Ministry of Energy (hydroelectricity) and the Ministry of Forests and

<sup>48</sup> This was an issue in the Madi area next to Chitwan National Park, where the settlement had been washed away by flooding and the people displaced to temporary dwellings. They were continuing to farm near the park, but reported that in the elephants and rhinoceros were crossing the buffer zone and damaging crops as well as threatening people.

Soil Conservation (MoFSC). In addition, under the Nepal Water Supply Corporation Act, 2046 (1989), the Water Supply Corporation is mandated to supply clean drinking water and to maintain the infrastructure for this, as well as establish sewerage systems as required by the Government. Particularly important in district level implementation is the Department of Soil Conservation and Water Management within MoFSC, as it has district offices in 55 districts of Nepal's 75 districts.<sup>49</sup>

The general law regulating water resources is the Water Resources Act, 2049 (1992), which concerns the “rational utilization, conservation, management and development of the water resources that are available in the Nepal in the form of surface water, underground water or in whatsoever form” (preamble). It requires licensing for commercial water usage and sets priorities for water usage, placing drinking water and domestic use first, then irrigation, agriculture and fisheries, hydroelectricity etc (s. 7). Of particular relevance to CBDRR is that this Act does provide for the formation of legally incorporated local Water Users Associations (s.5) which can be handed over control of water resources projects (s.11), although in the timeframe of the present study the Project Researcher was unable to investigate the extent to which these legal provisions are used, if at all.

The Soil and Watershed Conservation Act, 2039 (1982), as amended to 2010, is also of key relevance in DRR, and it is also administered by the Department of Soil Conservation and Water Management. Its main purpose is to conserve land and watersheds “by controlling natural calamities such as flood, landslide and soil erosion” in the interests of the convenience and economic interests of the general public (preamble). It includes implementation of land use systems which, for example, can potentially ensure agricultural activities do not destroy or weaken the long term use of the land. This Act also empowers the Government to declare certain watershed conservation zones and to specify what activities can or cannot be conducted in them, and also to order industries or residents to move away from vulnerable land (s.11). This is, however, not a regulatory scheme open to local government and/or community participation, as it is administered by civil servants, albeit with the possibility of establishing a District soil and watershed conservation committee for consultative purposes. It also includes severe penalties (fines or imprisonment) for certain infringements of the Act, and therefore it has more of a law-and-order flavour to it than a vehicle for community motivation or participation. The rationale and legal powers provided under the Soil and Watershed Conservation Act can potentially be used for much stricter broad controls over waterways, in the interests of flood prevention and mitigation. However, the gap in this legal framework is the lack of a clear role for district and local government, which also makes it unclear how those levels of government can integrate water management into their disaster management and DRR plans. The water user groups also have the potential to integrate local and community based DRR with overall water management at community level, if these provisions are used.

<sup>49</sup> Conversation with Mr. Batu Krishna Uprety, Ministry of Environment.

Analysis of legislation related to disaster risk reduction in Nepal

# Chapter 4

## Findings

References to “legislation” in this section include laws and rules at the national, regional and local levels, including both multi-hazard disaster management legislation and sectoral laws (e.g., environmental management, building regulations etc). The short time span of this project did not allow for a review of local regulations. However, the main powers of local authorities are conferred by the Local Self-Governance Act, and they then also have implementation responsibilities under other national laws, such as the Building Act, the Forest Act etc. Some representative examples are discussed here which shed light on the practice of local authorities under these powers. Also due to the time limits of this project it was not possible to conduct community consultations, but rather to visit some communities and projects to gain a better understanding of the issues they faced and the methods of establishing and sustaining community based DRR capacity.

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## Institutional clarity

### National coordination of DRR

As noted above, the existing legislation – the Natural Calamities (Relief) Act 1982 – is focused on rescue and relief. Under this Act institutional responsibilities are clear, in that there is a Central Natural Calamity Relief Committee which is widely representative of all concerned ministries. It is also clear under this Act that implementation responsibility lies with the Ministry of Home Affairs, whose district level officers – Chief District Officers (CDOs) – have wide ranging powers during a declared disaster. Essentially, this is an approach to disaster management which is primarily concerned with logistics and law and order. It also provides for natural calamity relief committees at the district and local level (Municipality and the VDC).

The shape of the proposed new Disaster Management Act, which would replace the current legislation, is not yet entirely clear. It is clear, and there seems to be broad consensus on this, that it will take a much broader approach to disaster management and incorporate a broader range of government ministries in a peak national Commission. It also seems likely that a specialist National Authority for Disaster Risk Management (NADRM) will be established, which will have primary responsibility for implementation. If the model proposed in the National Strategy for Disaster Risk Management is followed in the new Disaster Management Act (DMA), then single disaster management committees would also be established at the regional and local levels. However, if the three-column approach is taken at the national level and replicated at district and local levels, this could see a division of disaster management into three subsectors with different Ministries having primary responsibility, and with potentially competing committees at district and local level. This would present a considerable challenge to the effective implementation of DRR, which relies not only on integration between rescue and relief, preparedness, and reconstruction, but also integration into local development planning.

Assuming the new DMA is implemented in the near future, the main gap in terms of institutional clarity is then likely to be that the different national government ministries and departments which manage environmental conservation generally, and water and forests in particular, are not integrated into the regional, district and local disaster management framework. In some cases they also do not have clear legislative mandates to include DRR measures per se, although the relevant legislation addresses questions of environmental conservation and sustainable development.

On a positive note, although only recently formally approved, the National Strategy for Disaster Risk Management implementation process has already begun in terms of establishing the institutional structures and planning at district levels. Almost all districts have now developed District Disaster Risk Management plans.

### Hazard monitoring and risk mapping

In terms of hazard monitoring and risk mapping in Nepal, it appears that a range of different Ministries and national NGO's take on this role, often with support from INGOs specializing in risk assessment, and UN agencies. Yet unfortunately this is one aspect of DRR which is not well coordinated in terms of the legal framework; it shows in fact a clear gap in legal regulation, although a great deal of thorough research and information sharing occurs at the national level. However, under the new national strategy, an important element of the district and local DRR planning processes should be hazard monitoring and risk mapping.

An integrated planning process at district level could help avoid situations such as that which has arisen recently regarding exploitation of riverbed boulders. It appears to have become a common practice for local communities to extract riverbed sand and boulders for domestic construction. According to news reports, in some districts there are also now large-scale river-stone crushing operations, licensed at district level, primarily for export to India. However, it is increasingly clear – including from a recent parliamentary investigation – that this type of activity has a very negative impact on riverbed erosion and silting, with downstream effects, as well as in some cases destabilizing bridge foundations. But Government efforts to reduce this activity by banning exports to India have met with opposition from licensed commercial operators, despite a court ruling to that effect.<sup>50</sup> A coordinated approach to DRR would ideally prevent such a situation arising, where a commercial activity that is profitable in the short term clearly increases the vulnerability of the same community to the risk of flood and its associated economic loss in the medium to long term. Of course the evidence is not always available until some damage has occurred, but an integrated approach to DRR could provide a mechanism, preferably at district or local level, to resolve such dilemmas in the long term interests of the affected communities, including their most vulnerable members.

### Communication of impending disaster & early warning

During research and consultations for the present study, the project researcher did not encounter any specific regimes – legal or otherwise – intended to communicate systematically pending disasters to decision-makers, for example, to and from local and district level, or between district level and national level. There is certainly a process for such communication during a declared disaster under the current legislation, but warning of impending disaster appears to occur at a more informal level.

The question of warning systems – in particular Early Warning Systems (EWS) – is one which is being addressed increasingly in community-based disaster risk reduction projects in Nepal. The institutional framework is not altogether transparent, although under the Local Self-Governance Act the district and local authorities certainly have

<sup>50</sup> Navin Singh Khadka and BBC News Environment reporter, Western Nepal, 'Rock Trade Threatens Nepal Bridges', BBC News Online: <http://www.bbc.co.uk/news/science-environment-11923566?print=true>, 6 December 2010.

the power to establish such systems. However, the policy focus on EWS is as yet variable in implementation and appears mostly to emanate from specific DRR projects at community level. Nevertheless, some good practices have emerged from such community-based projects. For example, in a community-based project with Mercy Corps and the district chapter of the NRCS in the far western Terai district of Kailali, they began to explore an EWS based on volunteers upstream. This is an area prone to flash floods because there are small river systems at the base of hills and close to the Himalayas. They then discovered that the Department of Hydrology already had a monitoring system in place, which measured river levels three times a day. However, the measurement information was only reported once each month and then only centrally to the national office of the Department. The project was able to establish links with the Department of Hydrology so that the information was made available to the downstream communities, and to negotiate that during the heavy rain season monitoring would be increased to hourly measurements. The project also liaised with Nepal Telecom to maintain and upgrade mobile telephones or fixed lines (CDMA satellite phones) in each of the downstream communities, with an agreement that these lines would be given priority during the rainy season in particular. Using these phones, and a special telephone directory compiled as part of the project, downstream communities are now able to access hourly measurement updates from upstream throughout the rainy season.<sup>51</sup> These special arrangements with the relevant institutions providing measurement and communications are an example of the type of cooperation which could be replicated in many other communities, particularly those which are prone to flooding. However, when considering the legal framework it would be preferable if such cooperation was not ad hoc but, rather, mandated within the legislation establishing the responsibilities of bodies such as the Department of Hydrology and Nepal Telecom.

### Responsibilities in building code implementation

Another question of institutional clarity that has assumed central importance in Nepal is the question of overseeing building codes and land management. As noted above, the Department of Urban Development and Building Construction (DUDBC) has responsibilities under the Building Act for development and updating of the National Building Code.<sup>52</sup> The Act and Regulations specify requirements for approval prior to construction of larger buildings, (categories A, B and C in the Building Act s.11, not including category D, small homes less than 3 storey). At this stage the Building Regulations do not extend to small single storey dwellings, but the National Building Codes include technical specifications for all types of construction undertaken in Nepal, including the Mandatory Rules of Thumb (MRT) for non-engineered construction (which are 'mandatory' not in a legal senses but in a safety sense). However, the Department itself only has direct responsibility for ensuring that government buildings meet the required standards, in particular for earthquake resilience and fire safety. Implementation of the National Building Code and other requirements of the Building Act lie with local government. During consultations for the present report, there was even some discussion amongst those familiar with the processes, as to whether Municipalities actually had an obligation to implement these provisions, or whether the fact that they are established under the Local Self-Governance Act makes them independent from this

<sup>51</sup> Conversation with Ulla Dons, Mercy Corps Nepal.

<sup>52</sup> The NBC is set of 23 specific standards relating to different materials, types of construction and safety issues. These are listed in Annex C. They are available from the DUDBC electronically, in both Nepali and English.

obligation. A discussion of this apparent lack of clarity was also included in a recent engineering consultants report.<sup>53</sup> An analysis of the legal regime, and the hierarchy of laws in Nepal, indicates that the Building Act and its Regulations are certainly part of the legal obligations of local government. The fact that the National Building Codes are incorporated into the Regulations by reference would also tend to suggest that local government also has an obligation to enforce the codes. However, as more than one of those consulted observed, the issue is not so much whether municipalities are required to enforce the building codes, but whether they have the by-laws in place and the resources and the capacity to do so.

A slightly different perspective was provided by officials in the two Kathmandu Valley municipalities visited for this project, Kathmandu Metropolitan City and Lalitpur Sub-Metropolitan City and also by the Ministry of Physical Planning and Works. They spoke about the lack of a culture of compliance with any form of building regulation, and the need to persuade their communities that there was a real risk, which could be reduced by implementing the building codes. They did not feel that they lacked technical capacity or qualified personnel to conduct inspections of buildings, but this was not done systematically because even where non-compliant buildings were identified they felt there was no acceptance of the idea that these should be demolished or halted. One informant indicated that whenever such action was attempted there were almost always legal complaints from the owners/builders/developers and so the process became mired in litigation. They seemed to hold the view that although the Municipalities had formal legal authority it was very difficult to exercise it without community acceptance. One informant suggested that one reason the Municipalities cannot carry sufficient authority on this issue is that they are not currently elected, so that this level of government (as with VDCs in rural areas) is essentially weakened.

Although the reduction of earthquake risk is a monumental challenge for Nepal, given the poor quality of most existing buildings, this situation has nevertheless given rise to two particular good practices:

- The first of these is the proactive role of the DUDBC. Despite the limitations of its direct legal mandate – limited to ensuring that hospitals, government schools and public offices comply with the National Building Codes – the DUDBC also plays a role in developing public awareness and resource materials for earthquake resilience. It often draws on research and experts from other bodies such as the Nepal Society for Earthquake Technology (NSET). DUDBC now also works closely with UNDP in the Earthquake Risk Reduction and Recovery Preparedness Programme for Nepal (ERRRP),<sup>54</sup> which is resourcing Municipalities to commence implementation of the National Building Codes, conducting community-based earthquake risk reduction projects, many based around schools as a community focus, and involving capacity-building, retro-fitting of public schools, and earthquake evacuation mapping plans, as well as providing technical training to masons across the country (7,000 trained). This project is currently working with five municipalities to help change attitudes and develop capacity as well as to implement functioning systems of construction certification and building approvals.
- The second of these good practices was the creation, some tens years ago, of the Mandatory Rules of Thumb (MRT) for non-engineered construction. Given that over

<sup>53</sup> 'Recommendation for Update of Nepal National Building Code: Final Report', (Kathmandu: Government of Nepal, Ministry of Physical Planning and Works and UNDP/ERRRP, 2009).

<sup>54</sup> <http://errrp.org.np/publication.php?mainid=288>

90% of buildings are owner-built and/or non-engineered, it was recognized by NSET some years ago, that some guidance was better than none. They developed the MRT as a set of guidelines for people who were not qualified in engineering, and these continue to be promoted by the DUDBC as part of the National Building Codes, although they are not directly incorporated into the Building Regulations and are thus 'mandatory' only in the sense that they represent the minimum standards for safe buildings rather than an enforceable code. The Building Regulations specify the type of regulation required for larger buildings, most of which are in urban areas, but the MRT gives guidance for owner-builders of smaller buildings, in both rural and urban areas. A recent engineering report on the Building Codes recommended the abolition of the MRT on the grounds that it did not guarantee earthquake-resilient buildings, and even its creators recognize it alone is not enough. However, it would seem unfortunate to jettison the whole idea of an ordinary person's guide to building small earthquake resilient buildings, especially since the current Building Regulations do not extend to small dwellings made with traditional locally available materials. Rather, it seems that this is a model which could be replicated in other countries with a similar building tradition and materials, provided the technical specifications are sufficient to produce earthquake resilient buildings and that there is basic training or technical expertise available to support it.<sup>55</sup>

In terms of land use planning, especially new developments in the greater metropolitan area of Kathmandu, this is also a challenge because of lack of planning overlay laws, and therefore a lack of planning for urban development in the past. It is noted in this regard that the Nepal Risk Reduction Consortium's Flagship area 5 on Policy/ Institutional support for Disaster Risk Management calls for land use management planning, and especially the development of a risk-sensitive land use plan for the Kathmandu Valley, "where the absence of land-use planning and management of human settlement has considerably increased the vulnerability of people to risk from hazards."<sup>56</sup>

It appears that in areas of vacant private land, public land has not been reserved, nor any other legal provision made in the past, for sufficiently wide roads, public spaces and entry of essential utilities and services. As a result, many of the same risk factors are being replicated in new developments, not just in terms of poor building quality but also narrow streets which do not allow emergency vehicle access, and lack of public open space for evacuation. This continues to be a major gap in the legal framework for urban development planning in DRR terms. However, faced with such unplanned residential and commercial development on wholly private land, the Ministry of Physical Planning and Works (DoPPW) has pioneered a voluntary 'land pooling' system. The landowners agree to sacrifice – or 'pool' – a proportion of their land, some of which is used to provide proper width access roads and public open space, and some of which is consolidated into a 'sell spot' (a parcel of land which is sold to meet the collective cost of pre-fitting infrastructure and services). Although they may hand over 30-40% of their land, the incentive for landowners is that the price of their remaining land increases, usually by around 200%, due to the planned development. This requires

<sup>55</sup> Subsequent to the country visit for this report, the UNDP/ERRRP project launched a booklet, in Nepali, with the title (translated) "Illustrated Guideline for Construction and Earthquake Safe Residential Building", based on the National Building Code. For the latest developments see: <http://www.errrp.org.np/>

<sup>56</sup> Nepal Risk Reduction Consortium, 'Disaster Risk Reduction in Nepal Flagship Programmes' (2010) at 33.

the agreement of the landowners, but so far twelve such developments are nearing completion.<sup>57</sup> Although this ad hoc negotiated land pooling solution is innovative and a good practice which can be replicated in similar circumstances, there is an urgent need for overriding legislation that could place a land use planning overlay on new urban developments. This is the only way to prevent new settlements occurring on unsuitable land (e.g. flood prone or unstable) and to ensure that new urban settlements have space for infrastructure (especially sufficiently wide roads for emergency access) and public open space for earthquake evacuation. It is a particularly acute need in the Kathmandu valley, where planning responsibility is split between 5 municipalities and the DoPPW, and where urban growth is rapid and still largely unregulated, creating new fire hazards and earthquake risks every day.

## Fire

There appears to be no general law on fire safety, although forest management is a key legal framework in rural areas. In urban areas it is the default responsibility of Municipalities and the DoPPW under their general mandates. The Building Codes also includes specific fire safety standards, so that their full implementation by Municipalities, and eventually VDCs, will be crucial in reducing the risk of fire related disasters in urban areas.

## Mitigation measures – construction responsibility

District and local governments do have authority to undertake and maintain physical improvements such as flood mitigation measures. Larger developments such as management of large river systems, especially when there are cross-border issues involved, become national responsibilities. An example is the Koshi River in eastern Nepal following the 2008 floods, where an ad hoc compensation schemes was established at the time, and then a resettlement programme has been agreed at national level for displaced or high risk communities, and implemented by UN Habitat in cooperation with the district and local authorities. The entire Koshi River Basin has also now been given priority in the Flagship Programmes of the Nepal Risk Reduction Consortium, part of implementation of the NSDRM. These very large-scale measures become national responsibilities, but often not in a very proactive way, as the Koshi initiatives are directly attributable to the major disaster that preceded them. There is potential under the Soil and Watershed Conservation Act 1982 to take a more broadly coordinated approach to river system management, but the role of district and local government under this Act is not clear.

At local and community level in rural Nepal, there is often no actual government presence (due to not having elections for more than a decade) but, in any event, many communities have a resilient self-help attitude to measures such as flood mitigation. This works well for small-scale community measures, but can run into difficulties when another community is impacted. For example, in the Madi area of Chitwan District, visited by the Project Researcher, the community of Chandrapuri village (Gardi VDC, Ward No 1) confronted the situation that the annual floods in 2010 changed the course of the Rawa river. It displaced homes from the opposite bank and cut away large tracts of their rice-growing land. This community had commenced flood mitigation in the form of a long stone construction to redirect the river to its original course, but the

<sup>57</sup> Conversation with Mr. Suresh Acharya, MoPPW.

community on the other side of the river objected that this would send the floodwaters to them. The local authorities had not been able to resolve the dispute and they believed it was now in the hands of the Chitwan district authorities. The District authorities, on the other hand, seemed to perceive this as a local dispute, which needed to be sorted out between the political factions and parties in that area. And yet, in the absence of elected local government, there was no clear mechanism to do this. So, four months after the flood, the wall remained partially built and it was not clear that any further preparation would be done before the 2011 monsoonal rains.

### Displacement, relocation and land compensation

According to informants for this project there are small standardized compensation amounts designated for death of family members and other losses due to disaster. However, when it comes to questions of displacement and relocation, especially if such schemes require the government to purchase or give land, it appears that ad hoc arrangements must be negotiated, with resources from the national level and/or from external donors. As far as can be determined, there is no legislated right to be relocated from high-risk land, or when the land has been swept away and/or permanently inundated by floods and changes in river flows. Both the legal arrangements and the resources have to be negotiated on a case-by-case basis. Some examples of the types of issues arising were evident in the Madi region of the Chitwan district which was visited by the research Consultant. These were the following situations:

- Amiliya village (Gardi VDC, Ward No. 1), where the annual floods in 2010 had displaced 70 families from the other side of the Rawa River (close to Chitwan National Park jungle), who, after four months, were still living in tents on the VDC Gardi land, with inadequate water and sanitation facilities. They said they were able to walk an hour to farm their land, but had not rebuilt their homes there because of the high level of flood risk in the coming year, and increasing threats (to human life as well as crops) from elephants and rhinoceros encroaching from the National Park. They were requesting relocation, which required District government support and, ultimately, a decision and resources allocation at national level, as similar schemes elsewhere have been devised on an ad hoc basis.
- Bagauda VDC, where 30 families had been living in temporary shelters on the Madi Higher Secondary School's land since the 2010 floods of the Rawa River which caused their displacement from the Pawari village (Bagauda VDC, Ward No. 6). Their homes and land were not completely washed away, but they suffered losses and did not wish to return to unsafe land. They were hoping the government would find land to relocate them; in the meantime, they reinforced their temporary homes hence establishing a relatively permanent village on school land. This left local authorities with a legal dilemma as to how to keep the land for school use while being unable to relocate those who had taken refuge there.
- Ramrajapur village (Kalyanpur VDC, Ward No.2), where the 2010 floods had changed the course of two rivers, the Chandra and Badarmudhe, sweeping away large tracts of rice-growing land and leaving only sand, as well as bringing the river bed closer to the village so that 25 homes were now directly threatened in any future flood. Residents of the village faced the additional complication of being 'generational landless', having lived and farmed in the area for forty years, but without title to the land (for which they had applied some years ago). They were seeking relocation for some families but the lack of land title complicated the issues.

On the questions of relocation per se the Local Development Officer of the Chitwan district indicated that a funding application had been made to the national government. Decision-making power and resources for such schemes were apparently not available at district level, so the outcome was dependent on the national level.

On the other hand, there have been success stories in similar situations, for example:

- Also in the Chitwan Madi area, Jagatpur Red Cross village (Jagatpur VDC, ward No. 1), nine years ago a flood-affected community was relocated into forty houses built by the NRCS on government-purchased land. This community had been able to continue farming their original land while living in the new medium-density housing on land above the flood line. It is an example of a model of flood risk reduction by relocation and reconstruction of the housing only, which had worked well in this situation; or
- A larger scale programme, which also represents good practice in terms of relocation of flood-affected communities, is the Koshi River project mentioned above and led by UN Habitat. Of 7,300 families affected, the programme identified 1,400 generational landless families in need of resettlement, and so far the government managed to purchase land for housing and small farms for 235 of them. In this case UN Habitat obtained seed funding for low cost housing using locally available materials, and land titles were handed over to those relocated with the condition that such could not be sold for a period of ten years. An important innovation towards gender equality in this project is that the title is clearly in the name of both the husband and the wife, and they are presented with a (formal but symbolic) house certificate in both names. UN Habitat is still proceeding with the slow process of self-selection and verification for the remaining families.

These cases illustrate that when questions of land loss or landlessness become enmeshed with flood or other disaster compensation, the legal and institutional framework for resolving such claims is not clear. Some communities do relatively well, if they have been part of a high-profile disaster which has generated international donations, while others can fall through the gaps. These cases highlight a gap in the legal framework for DRR, whereby there is no consistent mechanism to relocate communities from high-risk land.

It seems that CBDRR or other micro-DRR projects do not really need positive laws to work well. Arguably they need an absence of legal restriction, as well as capacity, motivation and resources (which can often be found within the community). But it is apparent from some of the above examples that law quickly becomes relevant when DRR measures:

- a. need to go beyond a single community, such as in river and water management
- b. encounter legal issues, obstacles or restrictions that need to be removed or modified
- c. give rise to disputes with neighbouring communities or within the relevant community which need to be resolved in order to move forward
- d. require medium to long term positive regulation such as mandatory land use planning, building codes and environmental management, in order to be effective

- e. require medium to long term planning and budget allocations involving mandates of governing institutions established under law

### Planning for climate change adaptation

In 2010 the major initiative, the National Adaptation Program of Action (NAPA) to Climate Change was completed by the Ministry of the Environment, with assistance from Denmark, GEF and UNDP Nepal. At this stage it is not clear how this will be integrated into disaster management and DRR at national, district and local levels, although its focus on development fits well within the devolved powers of district and local development authorities and many of the issues and actions it contains have very direct relevance to DRR.

### Community-level analysis

As noted above, it was not possible to conduct community consultations within the timeframe of this project, and therefore the following information is based on a small number of community visits, legislative provisions, written information about community initiatives, and the views of the informants consulted for this project (listed in Annex A), some of whom were working in community based DRR projects.

Existing legislation – the Natural Calamity (Relief) Act 1982 – does not set out requirements for risk mapping at community level but only provisions for disaster response committees at district and local government levels, and only in the context of a disaster. However, the National Strategy for Disaster Risk Management in Nepal (NSDRM), and also the Flagship Programmes designed to implement key elements of the NSDRM, do have a much greater focus on DRR and on community implementation. The NSDRM Priority Action 1 includes the strategic activity of integrating DRR and preparedness into the development plans, programmes and regular activities of district and local government bodies. NSDRM priority Action 2 focuses even more specifically on risk mapping and hazard monitoring. The NRRRC Flagship Programme 4 also focuses on these issues, through community-based action on DRR. However, at present, the legal basis for such mapping as an obligation does not exist. Likewise, the legal framework for assessing vulnerability and capacity at community level is not specific except in the context of an actual disaster and, to the extent that it is done systematically this occurs through district or local development plans. It should of course be part of the district and local level disaster risk reduction plans currently being developed at these levels under the NSDRM, but these are in the early stages.

### Community information

The existing legislation does not set out specific mandates on disaster risk reduction education for children and adults. However, the NSDRM Priority Action 4, 'Better knowledge management for building a safer culture,' does so. This envisages school-based and adult training programmes for all stakeholders, and awareness-raising campaigns in cooperation with NGOs, CBOs and others. In the Flagship Programmes the first Flagship area is also identified as school and hospital safety which – although focused on structural safety against earthquake risk – promotes awareness-raising on the importance of safe construction as a key element. Clearly Flagship 4 on community-based DRR also includes awareness raising and training as essential elements. Again however, these

are policy approaches rather than mandated legal frameworks and are in the early stages of implementation.

Disaster warning systems do not appear to be mandated in any current legislation, and the 2008 Koshi floods highlighted weakness in the Government's response capacity relating to such a large regional event some distance from Kathmandu. One part of the response to this experience has been the construction of a national emergency operations centre (EOC) to improve information flow in disaster situations, which is almost completed. The intention is that it will eventually be matched by more local EOCs to pass information to and from community level, and also that telecommunications will be made more disaster-proof. These are elements of the NSDRM Priority Action 5 and the Flagship Programme 1 concerning emergency response and preparedness capacity. It is too early to judge the extent to which communications under these policies will be implemented effectively at community level, and it is unclear whether the new Disaster Management Act will address this issue specifically.

There appears to be a general consensus amongst national level actors that information flow needs to be facilitated, although the present study does not have information about the views on this at community level. Looking at the many documented examples of community-based DRR projects where warnings and information flow have been identified by the communities as high priorities could provide a good indication of this. For example, in the course of the Project Researcher's visit to the Madi area in Chitwan district, residents of Chandrapuri village (Gardi VDC, Ward No 1) happily recounted that no lives were lost in this year's flood as they had sufficient warning. It was a slow-spreading shallow flood and, with timely information, residents were able to prepare adequately for the inundation of their homes. Their warning system appeared to be based on a network of personal contacts, with limited use of telephones, as most people there do not have or carry mobile phones.

### Community consultation

The existing Natural Calamity (Relief) Act 1982 (s.5) provides for representation of the Nepal Red Cross Society (NRCS) in the peak national committee. However, there is no specific provision for other NGOs or CBOs at this level, nor any commitment to encourage such participation. There is provision for regulations concerning the composition of regional, district and local committees (which, if made, are not available in English). The new Disaster Management Act may be somewhat different in its approach as, based on the perspective in the NSDRM, a much greater level of non-government participation is expected at all levels. Although district disaster risk reduction plans have now been developed across Nepal (available in Nepali), the Project Researcher was unable to obtain more specific information on the processes involved, although informants spoke about extensive consultations through workshops. The projected development of similar plans at local level (VDC and Municipality) will be an opportunity for community-level input.

### Community organizations

The system of local self-governance in Nepal is designed to provide governance at a level which is almost community-specific (i.e. Wards as sub-sets of Municipalities or VDCs). However, the absence of elections has meant that in many cases such systems does not operate this way. In many districts the NRCS is one of the main forms of

community organization, with its strong system of District chapters and sub-chapters across the country. The NRCS often seems to be relied upon by local and district government officials as an adjunct to government concerning disaster-related and humanitarian matters. However, the NRCS does not seek to replace broader community organizations and, even regarding DRR projects initiated by it, is not sufficiently resourced to support such community projects on an ongoing basis. Local political parties also often play an important role at community level, and yet because their activities are not structured in the context of elected local government and specific institutional structures, this can be an unpredictable factor.

The community-based DRR approach popularized by the NRCS and its partners, and other INGOs working in Nepal, is well supported with training materials and is based on an inclusive model.<sup>58</sup> These projects are based on identified need and a socially inclusive model to establish community based DRR committees that represent women and men, different ethnic and social groups, and the most vulnerable members of the community. They are small-scale and short-term, usually around three years. At their best, they work closely with local and/or district authorities, sharing expertise and thereby entrenching the DRR projects and committees into local government. Their objective is to provide training and awareness in DRR, to assist the community with some mitigation measures (with seed funding and community contributions in cash and kind), and to build the capacity of the committees to be able to sustain the community DRR processes into the future.

One of the important components of this model is the way the community is consulted and the DRR committee formed. In the early consultations, the community members meet in separate social groupings, with men and women meeting separately and – as relevant to the community – different caste or ethnic groups also meeting separately within the gender groups. When it comes to forming the DRR committees, each of the relevant social groups elects their own representative(s) to the Committee. This ensures that everyone has a voice, which is especially important for the most vulnerable and socially excluded people.

These projects appear to be very successful, and are often formalized by establishing a registered community based organization (CBO) which continues to manage a community revolving relief fund and which, importantly, can then access government funding for future projects. The challenge in rolling out and sustaining such projects is that there is often a gap in local governance, due to geographical isolation (especially of some mountain communities) and the lack of elected representatives. This means that there is also often a gap between community-based DRR implementation and formal government DRR policy from the national level. However, many district, local and national officials do work effectively with communities.

The process for registration and maintaining status as a CBO under the Associations Act is not difficult (application is to the office of the Chief District Officer), although the regulatory regime is arguably more controlling than enabling. Such registration is encouraged in community-based DRR projects, especially by the NRCS and its partners, as a way to structure the DRR committees at the handover point when the external involvement in the project ends. While some groups prefer to continue working within the NRCS, or informally, others have created CBOs and worked successfully with local and district government on further DRR planning and projects. One of the benefits of

<sup>58</sup> Nepal Red Cross Society, 'CBDRR Training Manual 2010'.

establishing CBOs as registered legal entities is that such are legally accountable to the community for use of their collective resources given for DRR. The other important advantage is that they can obtain government funds when available, which is not possible for unregistered committees. This is a good practice which may be a model for local DRR committees elsewhere.

### Community incentives

The Project Researcher has not become aware of any broad community incentives to improve DRR. This is another gap in the consideration of the role of communities in the current legal framework for DRR. In practice, communities affected by almost annual floods, for example, appear to be highly motivated on their own account, as was evident in the Chitwan Madi community visits. However, seismic safety is a much more theoretical question for most people and sustained motivation is difficult. The Project Researcher visited two NRCS community based earthquake DRR projects in the Kathmandu Valley (Lalitpur and Kirtipur), where the focus had been on training community members to assist in the first response in the event of an earthquake, and providing basic earthquake kit boxes with hand tools for digging etc. One training project had been conducted 4 years previously and one only recently completed, which had also focused on multi-risk training. When speaking to those involved in the earlier training, it was evident that the memory was no longer fresh; indeed, maintaining skills which are not often used appears to be a difficult task especially in those situations where training is undertaken on a completely voluntary basis.

The biggest seismic risk is of course the built structure. As noted above, there are National Building Codes under the Building Act, which are legally enforceable at the local government level (except for government buildings, which are a national responsibility of the DUDBC/MoPPW). However, implementation has barely begun, even in large municipalities, although the UNDP/ERRRP project is slowly rolling out to municipalities the capacity building and public awareness campaigns which are necessary to establish functioning building approvals mechanisms. Two of the municipalities visited for the present project – Kathmandu and Lalitpur – had implemented a documentation approval process for new buildings but, in essence, had no inspection system and no effective penalties for non-compliance because any attempt at enforcement resulted in litigation. For example, while a number of those interviewed mentioned cases where an approved 3-storey building became a 6-storey building when completed, no one could recall any cases where they had been wholly or partly demolished for non-compliance. It is highly unlikely that building code compliance will be achieved in the absence of this type of inspection and enforcement, although clearly this type of process must also be accepted, so that public awareness campaigns remain an essential part of the process. Some informants expressed the hope that community education would make people see the importance of safe buildings, but others said it usually came down to cost; those who could afford it built better and those who could not used whatever materials they could afford. The same issue applies to fire safety considerations, also an important component of the Building Codes.

There seems little incentive for owner-builders to construct higher-cost safer buildings when everywhere around them 'wildfire' construction is occurring. There is no mechanism for subsidy of higher cost safer construction and, at this stage, no programmes for seismic retrofitting of private buildings or for subsidization of such reinforcement (and any such schemes would obviously have major cost implications for Nepal). The

Building Act and Regulations and the Building Codes provide the legal framework for implementation by local government. However, especially in urban areas it is essential that the full cycle of a legal building regulation process is implemented for new construction. This needs to start with plans approval but also include inspection and enforcement (e.g. not allowing occupation or rental of non-compliant buildings) or penalties (e.g. whole or partial demolition and/or fines). If this cycle is broken at any point the system will not function effectively, as cost and commercial considerations will invariably take precedence over more theoretical notions of safety, at least for larger urban buildings where there is not the direct incentive of the personal safety of the owners and their families. In addition, major incentives or assistance would seem necessary to begin any process of retrofitting and certification of existing buildings, especially larger buildings in urban areas.

Training and certification of masons/bricklayers is also another approach pursued by the DUDBC and the UNDP/ERRRP project nationally, and also by the Municipality in Lalitpur. However, in Lalitpur, when the Municipality investigated whether it could allow only certified masons to work in its area, they encountered the problem of labor laws and of not being able to discriminate on this basis.

In addition, outside the Municipalities, the Building Act is not enforced at all, in part because the Regulations do not establish an institutional mechanism for local level approvals by VDCs. The requirement is there in the Act but not in the Regulations, so effectively most small building construction is not legally regulated at all, even in theory. In this regard the Mandatory Rules of Thumb (MRT) included in the National Building Codes provide guidance for lay builders, but no particular incentive other than the owner-builder's own desire for safety. Nevertheless, this can be a compelling incentive for individuals and their families.

From many conversations with informants for the present report, it seems that there is a strong adherence in Nepal to the idea that anyone should be able to build anything they wish on their own land. There is clearly room for both awareness raising and incentives to implement a system of seismic safe building. However, in the absence of full enforcement of the Building Codes by municipalities it seems likely that unsafe buildings will continue to be constructed. Full implementation of this legal regime under the Building Act is the only means to guarantee compliance in new construction, especially in commercial developments. On the other hand, owner-builders of small dwellings, especially in rural areas, have an immediate personal safety incentive and therefore the training and guidance provided by the MRT is a good working model.

### **Community empowerment**

Existing laws do not articulate any rights of citizens with respect to disaster risk reduction, other than the general human rights in the Interim Constitution. However, one of the two key guiding principles of the NSDRM is that people have a right to be protected from disasters. If this is also translated into the new Disaster Management Act it will be an important legal right.

The Project Researcher has not become aware of any specific legal remedies or other forms of recourse for official or private failure to prevent disaster. On the other hand, some elements of DRR related to forest and water management are regulated under specific legislation which includes penalties for breaching them (as outlined above). To a limited degree this legislation also empowers communities to manage their own

environment sustainably. This is particularly true of the forest ‘user groups,’ which were mentioned by a number of informants as a very successful approach (although one person qualified this by saying that, when community forest are near major access roads, ‘you see the trees getting a bit thin’).

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### **Unique or notable aspects of existing DRR legislation**

It is difficult to pinpoint one main impetus for the development of the NSDRM and new Disaster Management Act, although it is clear that the Hyogo Framework for Action has been one important driver. Interest and support from donors such as ADB, DIPECHO, JICA and the World Bank has also meant that there are resources available, along with a strong presence of relevant UN agencies, INGOs, as well as advocacy and action from the NRCS and other national NGOs. In addition, the political changes in Nepal may have contributed to a perception that change was necessary and possible.

So far it seems that community based projects are leading the way on DRR in Nepal, not driven by the law but by assessed need and the importance of community empowerment. The national policy supports these and provides a mechanism to improve the institutional basis for a more programmatic approach to DRR, including its integration into planning for human development and environmental adaptation. In the absence of broader, legally mandated, DRR programme planning, however, these community based DRR projects will necessarily remain at the micro-level and, as such, may become stalled by disagreements between communities or simply be unable to deal with the wider causes of new hazards, such as deforestation / de-vegetation, or inappropriate water catchment and river system management upstream. It is hoped that the new Disaster Management Act will provide a solid legal basis for a broad-based and inclusive approach to DRR in years to come, enabling both community-based projects and district, regional or national programmes as required.

Analysis of legislation related to disaster risk reduction in Nepal

# Chapter 5

## Conclusions

Overall, there is a well-developed policy framework for DRR in Nepal, and also a substantial (though as yet incomplete) legislative framework, but the institutional structure for implementation needs strengthening at all levels of government. The challenge is to implement these measures in a period of political transition, and to move to a new system of implementation with full community participation to empower communities and create a sustainable approach to DRR.

It appears likely that the proposed Disaster Management Act will establish new coordinating mechanisms at all levels, including a National Commission for Disaster Risk Management chaired by the Prime Minister and an implementation authority, the National Authority for Disaster Risk Management. Of the two possible models for the district and local government levels, the one which integrates all the disaster management functions into single committees at each level would allow for greater coherence in planning, an essential part of DRR, which in any event has to cross over all areas of disaster management – rescue and relief, preparedness and reconstruction – and beyond, into development planning and environmental adaptation law and policy.

The type of community-based DRR projects under way in Nepal in some respects substitutes for elected local or ward committees in local government. At their best they work closely with local and/or district authorities, sharing expertise and thereby entrenching the DRR projects and committees into local government. They provide training and awareness in DRR and build the capacity of the committees to be able to sustain the community DRR processes into the future. Establishing the DRR committees as community based organizations (CBOs) aids accountability for management of community revolving relief funds and enables them to access government funding for future projects. The challenge in rolling out and sustaining such projects is that there is often a gap in local governance, due to geographical isolation (especially of some mountain communities) and the lack of elected representatives. This means that there is also often a gap between community-based DRR implementation and formal government DRR policy from the national level. Many district, local and national officials do work effectively with communities, and together they have developed some good practices. Some ad hoc arrangements with national bodies have also been effective, such as the NRCS/Mercy Corps project in Western Nepal which worked with the Department of Hydrology and Nepal Telecom to obtain and communicate information relevant to early flood warnings. But at the same time this illustrates a gap in the mandate of these bodies, as such information and communication technology should be made available to at-risk communities as part of a broader DRR strategy. It seems that, in the absence of legally mandated broader coordination, community based DRR projects are limited in their capacity to deal with larger scale mitigation measures or the causes of hazards, or to prevent the creation of new hazards, especially where these are generated by human activity higher in the mountains/hills or upstream in the river systems. Such wider-ranging DRR programmes require coordination under the legislation concerning communications, hydrological/meteorological measurement, and water, forest and general environmental management. At present these national regimes do not appear to be well integrated into national, district and local government planning for DRR and have limited connection with community based DRR.

Under current disaster management legislation communities are not greatly empowered and DRR is not the focus, but under the NSDRM the emphasis has changed. In addition, some of the environmental legislation gives specific responsibility to communities in sectors such as forest and water management (forests ‘user groups’, national park

buffer zone user committees, and water resources user committees) although these also include government controls. These could be used more, and linked more closely with environmental and development planning, but they do represent a positive legal model for community empowerment in local environmental management with the potential to focus more on DRR.

### Positive legal developments and good practices

Some of the good DRR practices enabled by the legal framework, or established to meet past gaps, include the current national disaster management strategy and its implementation process, innovative approaches to addressing earthquake risk, improving building regulation and safety, and planning for new urban developments, as well as registration of community based disaster risk reduction committees, as follows:

#### NSDRM

- The National Disaster Management Strategy (NSDRM), approved in 2009, is designed to dovetail with a new Disaster Management Act and appears to be widely accepted and supported at the national level. District governments have already established disaster management plans under this strategy and the next stage will be at local government level.
- An innovative form of international cooperation has been developed to prioritize and implement key elements of the NSDRM. This is the Nepal Risk Reduction Consortium (ADB, IFRC, UNDP, UNISDR, OCHA, World Bank) and its Flagship Programmes developed in consultation with the Government and other stakeholders.

#### Building regulation and earthquake risks

- There are many projects to retrofit public schools, hospitals and other public buildings for earthquake resilience, overseen by the Department of Urban Development and Building Construction (DUDBC) with assistance especially from the UNDP/Earthquake Risk Reduction and Recovery Project (ERRRP) and National Society for Earthquake Technology – Nepal (NSET).
- The DUDBC with the UNDP/ERRRP project has taken a positive approach to the challenge of private building construction regulation, through public education on earthquake risk from buildings and through training within municipalities and the building trades to encourage and enable correct implementation of the National Building Codes, especially for larger urban buildings.
- The DUDBC with NSET and UNDP/ERRRP has developed, distributed and provided training on the Mandatory Rules of Thumb (MRT), a set of voluntary guidelines in the National Building Codes intended for owner builders to construct earthquake and fire safe smaller buildings. The MRTs, pragmatically, recognize that most owner-builders do not generally have access to engineering advice (as 93 percent of buildings are non-engineered), especially in rural areas, and also that local materials will be used. This is a pragmatic approach in the absence of more complete building regulation, which could be replicated in other countries with similar patterns of non-engineered construction where full regulation does not yet exist.

### Land use planning for safety

- The Ministry of Physical Planning and Works has implemented a system of voluntary ‘land pooling’ in the Kathmandu Valley, which compensates for a lack of prior land use planning overlays or reservation of public land for future urban development. It reaches agreements with landowners who wish to create new urban developments, in which the owners sacrifice a portion of their private land in order to provide proper roads and other infrastructure, including public open space. The benefit to the landowners is that the value of the remaining land increases greatly, while the self-funding nature of these developments means the Government does not need to purchase land or pay for the new infrastructure. The important DRR element is that public safety is improved with good access for emergency vehicles (in fire, earthquake and other emergencies) and the earthquake hazard from falling buildings is reduced by having wider streets and public open space for evacuation.

### Community based DRR

- As part of the model of community based DRR projects pioneered by the Red Cross movement and partner INGOs including Mercy Corps and Oxfam in Nepal, community based DRR committees are established in a way that represents all the interest groups in the community. A good practice that has developed is that, at the end of these start-up projects, many of these committees are registered as community based organizations – CBOs – at District level. As the handover mechanism for inclusive community based DRR projects, this legal mechanism enhances community accountability for the management of revolving relief funds and other DRR decisions, assists in sustainability by making them less dependent on particular individuals, and allows these committees to access government assistance and to participate formally in local government DRR processes.

### Legal gaps, unused potential under existing laws, and good practices

Nepal now has a good policy basis for disaster risk management at a national level, as well as a national planning mechanism focused on human development through the National Planning Commission, and a new National Adaptation Program of Action (NAPA) to Climate Change. It also has extensive legal regulation of building and construction and environmental protection – including forest conservation and management of water catchments. Clearly there are gaps in the legal framework for DRR and in the institutional capacity to implement existing frameworks. However, there is also unrealized potential in some existing laws, as well as some good examples of innovative government approaches to the problem of lack of prior consideration for DRR in the areas of building regulation and land use planning. Good practices have also been pioneered by the Red Cross Movement, NGOs, INGOs, UN agencies and donors working with the Government, including a number of special projects on DRR. These gaps, under-utilized potential and good practices can be summarized as follows:

#### Gaps in the Legal Framework or its Implementation

The main gaps in the legal and institutional framework for DRR in Nepal concern disaster management legislation, building code implementation, land use planning and relocation of high-risk communities, and legal barriers to the participation of interna-

tional and national civil society, and community information on impending disasters, as follows:

### Disaster management legislation

- There is not yet a comprehensive and broadly based Disaster Management Act in place, and the current legislation focuses on rescue and response. At the time of writing the Government has announced that a Bill for a new Disaster Management Act has been approved. Based on prior information, such an Act is likely to contribute to DRR in Nepal by establishing new and more broadly representative disaster management institutions at national, regional, district and local levels. It is likely to establish:
  - A National Commission for Disaster Risk Management chaired by the Prime Minister
  - A National Authority for Disaster Risk Management as the implementation authority
  - Specialist committees on rescue and relief, preparedness and mitigation, resourced by the Ministries of Home Affairs (MoHA), Local Development (MoLD) and Physical Planning and Works (MoPPW)
  - Regional, District and Local disaster management committees involved in both planning and implementation

### Building regulation and earthquake risks

- There is not yet a comprehensive and/or adequately resourced mechanism to implement the National Building Codes to guard against the risks of earthquake and fire:
  - The Building Regulations under the Building Act do not yet establish a mechanism for approval of smaller buildings at local level, although these are covered in the Act itself. However, the development of the guidelines described as the Mandatory Rules of Thumb (MRT), noted under good practices below, is a pragmatic response to this gap.
  - The National Building Codes established under the Building Act have so far been only partially implemented by a small number of municipalities, meaning that high-risk buildings continue to be constructed, including in the heavily populated and seismically active Kathmandu Valley. Some actors believe that municipalities are not obliged to implement the National Building Codes, although this perception appears to be an error concerning the hierarchy of laws. Even where the codes have been implemented to establish prior approval of larger buildings, however, no municipality has yet managed to implement the full cycle of building regulation by establishing (1) prior approval, (2) inspection and (3) enforcement/penalties. It is suggested that these three elements are essential to achieve building code compliance.
  - There appears to be no legally mandated system for safety inspection of existing buildings for fire, earthquake or other risks. This would normally be a local government implementation responsibility under local by-laws, but it may require additional national legislation to create the obligation on local government and establish its parameters.
  - As yet there is no system of assessment or incentives in place to retrofit private buildings for earthquake and fire safety. Such a process would require massive resources, as 93% of the existing buildings are non-engineered. However, in the

absence of such a concentrated effort, little progress can be made on improving the earthquake and fire safety of the overall built environment, especially in established urban centres.

### Land use planning and high-risk settlements

- Land use planning is not clearly regulated and institutional responsibility for it is divided between the Ministry of Physical Planning and Works (MoPPW) and Municipal authorities, among others. New urban developments may occur without approval and the lack of prior reservation of government land for roads and infrastructure means it is difficult to ensure planned developments meet general safety standards, as well as that they do not occur on land at a high risk from natural hazards. As noted above, this has been identified as a priority in the Nepal Risk Reduction Consortium's Flagship area 5 on Policy/Institutional support, which calls for land use management planning, and especially the development of a risk-sensitive land use plan for the Kathmandu Valley. However, the voluntary 'land pooling' system pioneered by the MoPPW in the Kathmandu Valley (noted below under good practices) is a positive response to this legal gap.
- There is no consistent legal mechanism to relocate individuals or communities from high-risk land, especially flood plains. This has been done in various ad hoc ways, but is complicated when affected families do not have land title, or they do not wish to move, or when the government needs to purchase land for their relocation. It seems that some communities receive this type of assistance, while others do not, depending on factors such as the size and international profile of the disaster and the level of international assistance.

### Early warning and DRR communications

- There is not yet a specific legal or institutional framework for communication of impending disasters to and from communities. Relevant government entities which collect information or provide communications (e.g. Department of Hydrology, Nepal Telecom) appear not to have specific mandates to share information with communities or to support DRR and disaster related communications, although they have worked successfully with at least one community on early warning systems.

### Civil society participation in DRR

- The legal mechanism for the Welfare Council to register INGOs and coordinate their assistance (under the Social Welfare Act) is potentially very useful in coordination of DRR and other development projects in the national interest. However, in practice, the current resource levels and processes of the Welfare Council mean that it has become a bottleneck in the administration of DRR projects. This is an example of where the legal framework is potentially useful but in practice creates a barrier to community based and other DRR projects and programmes in Nepal when these are funded or supported by INGOs and external donors.
- There is also a gap in terms of broad support for national civil society participation in DRR in Nepal. Although the process for Nepali NGO/CBO registration at District level is straightforward, the absence of a system of national registration discourages the development of specialist national civil society bodies focusing on certain areas of DRR on a national basis. In practice some do operate this way (e.g. the Disaster Preparedness Network Nepal (DPNet), or NSET) but formal recognition would facilitate their ability to participate in national DRR consultations and peak bodies and to

work in local community projects throughout Nepal rather than only in the District of registration.

### **DRR Potential of Existing Laws**

Some of the existing legal mechanisms which have the potential to be better utilized for DRR are those which were established for environmental management and sustainable local development, as follows:

- The process of conducting environmental impact assessments (EIAs) for major projects under the environment protection legislation is well established. The mandate of the existing legislation provides considerable scope for the inclusion of specific DRR criteria in the EIAs, rather than setting up a new assessment system for DRR. This would also be consistent with the National Adaptation Programme of Action (NAPA) to Climate Change.
- The legal mechanism of community based forest ‘user groups’ available under the forestry legislation encourages conservation and sustainable exploitation, but also allows communities to reduce local hazards caused by poor forest management (e.g. landslides due to deforestation). Similar user group mechanisms are available under the environment protection and water management legislation. Although these legislative frameworks do not use the terminology of DRR they do have ample scope for the incorporation of DRR into community environmental management, so that these mechanisms offer as yet unmet potential in community based DRR.

While significant gaps in the DRR legal framework and its implementation remain, and legislative approval of the proposed new Disaster Management Act is clearly the first priority, the principal medium term challenge for a broad approach to DRR remains effective and coordinated implementation of each of these legal and policy frameworks at the local and community level, and in a way that empowers and builds capacity in communities.

# Annex A

## List of people consulted

### Government of Nepal

- Ministry of Home Affairs (MoHA) – Mr. Shankar Prasad Koirala, Joint Secretary, Kathmandu
- Ministry of Local Development Ministry of the Environment (MoE) – Mr. Batu Krishna Uprety, Joint-Secretary (Tech.), Chief, Climate Change Management Division, Kathmandu
- Ministry of Local Development (MoLD) – Mr. Reshmi Raj Pandey, Joint Secretary, Social Development Division, Kathmandu
- Ministry of Physical Planning and Works (MoPPW) – Mr. Suresh Acharya, Joint Secretary (currently working in UNDP/ERRRP Project)
- Department of Urban Development and Construction (DUDBC) (under MoPPW) – Mr. Amrit Man Tuladhar, Senior Divisional Engineer, Kathmandu (currently working in UNDP/ERRRP Project)
- National Planning Commission (NPC) – Mr. Reshmi Raj Pandey, Joint Secretary, Social Development Division, Kathmandu with Dr. Badri Pokhel, Joint Secretary

### Chitwan District

- Mr. Basant Raj Gautam, Chief District Officer (CDO), Bharatpur, Chitwan District
- Mr. Uddhav Prasad Timilsena, Local Development Officer (MoLD), Office of District Development Committee (DDC), Bharatpur, Chitwan District
- Mr. Bal Ram Luitel, Focal Person DRR, DDRG, DDC Chitwan District

### Local Government

- Kathmandu Metropolitan City – Mr. Ganesh Rai, Executive Officer (also Joint secretary, MoLD)
- Lalitpur Sub-metropolitan City – Mr. Prabin Shrestha, Senior Architect, Infrastructure Planner, Head of Urban Development Division, Lalitpur with Mr. Sainik Raj Singh, Civil Engineer, Section Chief Earthquake Safety

### United Nations

- UNDP – Joint meeting with Ms. Jenty Kirsch Wood, Team Coordinator Disaster Risk Management; Mr. Ghulam M Sherani, Disaster Risk Management Advisor; Om Shankar Mulmi, Project Coordinator, Disaster Risk Reduction at the National Level in Nepal
- UNESCO – Ms. Ellen Lange, Education/DRR Specialist with Mr. Ram Balak Singh, Education Unit

- UN Habitat – Mr. Gerard Matthew Ferrie, Shelter Coordinator with Mr. Padma Sunder Joshi, Habitat Programme Manager
- UN ISDR – Ms. Wendy Cue (telephone), Senior Disaster Risk Reduction Advisor
- UN OCHA – George Murray, Disaster Readiness and Response Advisor and Mr. Ram Prasad Luetel, National Disaster Response Advisor

### Red Cross and Red Crescent Movement

- IFRC Nepal – Ms. Victoria Bannon, Country Representative
- ICRC Nepal – Mr. Brian Thomas Veal, Cooperation Delegate, with Ms. Laure Schneeberger, Deputy Head of Delegation
- NRCS National Office – Mr. Bijay Dahal, Legal and Statutory Affairs Unit / NRCS Disaster Management team and IDRL consultant joint meeting: Mr. Rishi Khanal, Deputy Director, DM Department; Mr. Prajwal Acharya, Senior Officer DRR; Mr. Krishna KC, DM Officer; Mr. Tritha Raj Joshi, Officer DM Department; Ms. Sangita Aryal, Programme Officer, Safety; Ms. Kalpana Aryal, Building Safer Communities in South Asia; Mr. Marko Korhonen, Finnish RC; Ms. Sudha Kaffle, Officer, IDRL project
- Other National Red Cross Societies in Nepal – Mr. Marko Korhonen, Finnish RC, Nepal and Mr. Jorgen Kristensen, Danish RC, Nepal (telephone conference)
- NRCS Chitwan District Chapter and Madi area Sub-Chapters and Community Visits – NRCS Chitwan Chapter Joint meeting: Mr. Hari Prasad Neupane, President NRCS Chitwan District Chapter; Mr. Jagganath Neupane, District Chapter Officer; Mr. Gyan Shali Neupane, District Chapter Member Secretary
- Chitwan Madi region NRCS Sub-Chapter and community visits – The project consultant was accompanied by Indu Acharya, Jagganath Neupane and Gyan Shali Neupane and, in the Gardi VDC areas, also by Mr. Devendra Prasad Poudel, President, Gardi Madi NRCS Sub-Chapter. The NRCS sub-chapters visited were Gardi Madi, Bagauda and Jagatpur
- The village communities visited with the NRCS Chitwan District representatives in the Madi area, were: Chandrapuri village (Gardi VDC, Ward No. 1), Amiliya village (Gardi VDC, Ward No. 1), Pawari village (Bagauda VDC, Ward No. 6), Ramrajyapur village (Kalyanpur VDC, Ward No. 2), Jagatpur Red Cross village (Jagatpur VDC, ward No. 1)
- NRCS Kathmandu District Chapter and Kirtipur Sub-Chapter – Mr. Mukunda B. Pradhan. President, NRCS Kathmandu District Chapter; Mr. Ishuor Raj Balami, Board Member; NRCS Kirtipur Sub-Chapter, Earthquake DRR Programme Visit (with Indu Acharya and Ishuor Raj Balami)
- NRCS Lalitpur Sub-Metropolitan Region Chapter and DRR Unit 8 – Joint Meeting: Ms. Rabina Byanjankar, NRCS Lalitpur Chapter Office; and Members of NRCS Lalitpur Chapter DRR Unit 8: Samukaji Maharjan (Pres), Suman Maharjan (Motivator), Sanjay Shakya (Secr), Dikesh Maharjan (Treas), Alina Maharjan, Sangita Maharjan, Niroj Maharjan, Mukesh Shrestha

### NGOS, INGOS and donors

- DFID Nepal – Mr. Philip Smith, Senior Programme Manager
- Disaster Preparedness Network – Nepal (DPNET-Nepal) – Dr. Meen B. Poudyal Chhetri, Chairperson
- Nepal Society for Earthquake Technology (NSET) – Mr. Amod Mani Dixit, Executive Director

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- Mercy Corps Nepal – Mr. Sanjay Karki, Country Director with Ms. Ulla Dons, DRR Program Manager
- Oxfam-GB Nepal – Sten Van Leuffel, DIPECHO Project Manager with Mr. Rajesh Dhungel, Programme Officer

# Annex B

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- Nepal National Planning Commission, 'Three Years Interim Plan (2007-2010)', (Kathmandu: Nepal National Planning Commission, Government of Nepal: <http://www.npc.gov.np/en/plans-programs/detail.php?titleid=19>, 2008).
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# Annex C

## Selected Nepal legislation relevant to DRR

All laws and rules listed are available in Nepali and in English translation on the Nepal Law Commission website at <http://www.lawcommission.gov.np> except where otherwise specified.

### Disaster risk management

#### Disaster response, reconstruction, mitigation and risk reduction measures

- Natural Calamity (Relief) Act 1982 – The current main disaster management legislation, which is focused on response and is in the process of being replaced by a broader new Disaster Management Act (not yet released as a draft Bill)
- Local Self-Governance Act 2055 (1999) – Under this Act, responsibility for local governance and development (including DRR projects outside the context of a declared disaster) is delegated to Regional, District and local government. Local governments are either Municipalities, in urban areas, or Village Development Committees – VDCs – in rural areas.
  - Local Self-Governance Regulations 2056 (1999) (Ministry of Local Development [http://mld.gov.np/eng/?page=acts\\_reg&cat=reg](http://mld.gov.np/eng/?page=acts_reg&cat=reg))

### Building and construction and urban land use planning

#### Earthquake resilience, landslide prevention and fire prevention/access

- The Building Act, 2055 (1998)
  - The Building Regulation 2009 – (Unofficial English Translation, Department of Urban Development and Building Construction (DUDBC), Ministry of Physical Planning and Works (MoPPW). Specifies requirements for approval prior to construction of larger buildings, (categories A, B and C in the Building Act s.11, not including category D, small homes less than 3 storeys). Details documentation required for submission to the Municipality and the relevant District's Urban Development Office.
  - The National Building Codes – (English Translation, e-copies provided by Department of Urban Development and Building Construction (DUDBC), Ministry of Physical Planning and Works (MoPPW).
    1. Requirements for State-of-the Art Design An Introduction -NBC000
    2. Materials Specifications – NBC101
    3. Unit Weight of Materials – NBC102
    4. Occupancy Load (Imposed Load) – NBC103
    5. Wind Load – NBC104

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6. Seismic Design of Buildings in Nepal – NBC105
  7. Snow Load – NBC106
  8. Provisional Recommendation on Fire Safety – NBC107
  9. Site Consideration for Seismic Hazards – NBC108
  10. Masonry : Unreinforced – NBC109
  11. Plain and Reinforced Concrete – NBC110
  12. Steel – NBC111
  13. Timber – NBC112
  14. Aluminum – NBC113
  15. Construction Safety – NBC114
  16. Mandatory Rules of Thumb Reinforced Concrete Buildings with Masonry Infill –NBC201
  17. Mandatory Rules of Thumb Load Bearing Masonry –NBC202
  18. Guidelines for Earthquake Resistant Building Construction: Low Strength Masonry–NBC203
  19. Guidelines for Earthquake Resistant Building Construction: Earthen Building (eb) –NBC204
  20. Mandatory Rules of Thumb Reinforced Concrete Buildings without Masonry Infill –NBC205
  21. Architectural Design Requirements –NBC205
  22. Electrical Design Requirements for (Public Buildings) –NBC206
  23. Sanitary and Plumbing Design Requirements–NBC207
- The Construction Business Act, 2055 (1999)
    - The Construction Business Rules, 2056 (2000) – Date of publication in Nepal Gazette 2056.10.13 (27 January 2000). Licensing rules for construction business entrepreneurs.

### Environment, forest, water catchment and river management

#### Rural flood prevention, preparedness and mitigation, erosion/landslide prevention, forest fire management

- The Environment Protection Act 1996; The Environment Protection Rules 1997 / The Environment Impact Assessment (EIA) Order (no copy obtained) – This Act primarily concerns the environmental impact assessment of proposals to carry out development work or physical activity that may bring about change in the existing environmental conditions or any plan, project or program which changes the land use. As the Ministry of the Environment does not have an implementation role, this is administered by MoHA and MoLD officials at District level. However, under NAPA, the MoE would have a greater role in DRR in environmental impact assessments (EIAs). The EIA Order concerns major developments. At present the EIAs do not relate specifically to DRR, but this system is relatively well established and has the potential to be modified to include DRR criteria as part of the environmental impact assessment.
- Forest Act, 2049 (1993) (as amended to 4 Feb 1999) – The Act provides for the designation of forests areas and the type of exploitation that can or cannot be carried out in each. An interesting model of forest conservation is the designation of a “Community Forest” (s.25) where part of the National Forest is formally handed over to user groups

for its development, protection and utilization in the common interest of the community. This includes exploitation of timber, fruits, and animals in a sustainable way (although it can be taken back if mismanaged). This Act is administered by the Ministry of Forest and Soil Conservation, through the District government.

- National Parks and Wildlife Conservation Act, 1973; Buffer Zone Management Rules, 2052 (1996) – The Buffer Zones are a form of land adjacent to National Parks which may be partly managed by the local community, albeit under the ultimate control of state wildlife & conservation Wardens.
- Soil and Watershed Conservation Act, 2039 (1982) (as amended to 2010) – An Act for land and watershed conservation by controlling natural calamities such as flood, landslide and soil erosion and maintaining convenience and economic interests of the general public. It also makes provision for community user groups for water projects, (although no practical examples can be provided and it is not known if these provisions are used).
- Nepal Water Supply Corporation Act, 2046 (1989) – Nepal Water Supply Corporation to supply clean drinking water and sewerage systems as required by the Government.

### Recognition and regulation of CBOs/NGOs and INGOS in DRR projects

- Association Registration Act, 2034 (1977) – This provides for registration of associations (also often termed community-based organizations – CBOs -or NGOs) and sets out the requirements for elections, financial accountability etc. Registration is with the office of the Chief District Officer (CDO) for operation in that District.
- The Social Welfare Act, 2049 (1992) – Under this Act, the Social Welfare Council is a statutory authority mandated to coordinate non-government organizations working in social welfare roles (s.5), and to liaise with foreign governments and organizations conducting such activities (s.9). It issues certificates to INGOS to work in Nepal. The Council also approves and monitors community-based social welfare projects that involve resources from international NGOs, including DRR projects, which require its prior approval (except in an emergency context).

# The Fundamental Principles of the International Red Cross and Red Crescent Movement

**Humanity** / The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

**Impartiality** / It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

**Neutrality** / In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

**Independence** / The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

**Voluntary service** / It is a voluntary relief movement not prompted in any manner by desire for gain.

**Unity** / There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

**Universality** / The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.



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