

Chapter 3

National Disaster Preparedness

Prior to 1982, before the enactment of the Natural Disaster Relief Act, there were no plans or activities for disaster mitigation and preparedness. Disasters were dealt with as they came. It was only after 1991, following the declaration of the 'International Decade for Natural Disaster Reduction', that preparation for and management of disasters were taken into consideration. During the monsoon season in 1993, incessant rains for days flooded many parts of the country severely. As a result of these devastating floods, the government took steps to introduce disaster preparedness activities.

A National Action Plan was prepared in 1996 (MoHA 1996), and this is still the focal plan for devising the necessary measures for all kinds of natural disasters. The plan deals with different stages of a disaster: pre-, during, and post-disaster periods. However, even after 10 years of enforcement, satisfactory preparedness activities have not materialised. There is more than one reason for this: there are constraints in terms of resources; lack of coordination among the various institutions involved in disaster management; and the continuing, unstable political situation to name three. A revised version of the 1996 plan (MoHA 2005) is annexed in the Nepal National Report presented at the 'World Conference on Disaster Reduction' in Kobe, Japan 2005 (Annex 6).

Considerable effort has gone into post-disaster activities, but much less effort is given to preparedness despite the fact that there are several institutions involved in this field. Gradually, the realisation has come about in relevant sectors that timely preparation in some cases can mean that disasters are averted completely, and, in many other cases, the negative impacts and the cost of mitigation measures can be reduced.

Two types of institution are involved in disaster management in Nepal: i) institutions that form policy and coordinate activities, and ii) institutions that implement these activities. These institutions work independently within the mandates given to them. However, interdepartmental coordination also takes place as and when required. The activities of different agencies are coordinated at the national level by the Central

Disaster Relief Committee (CNDRC) as an apex body in the Ministry of Home Affairs (MoHA) (MoHA 1996; 2001; 2005; MoHA & UNDP 2004).

The two main groups of institutions are briefly described in the following sections.

Institutions at policy and coordination level

The following government institutions have a stake in policy formulation and coordination for disaster management.

- National Planning Commission
- Water and Energy Commission
- Ministry of Home Affairs
- Ministry of Water Resources
- Ministry of Forest and Soil Conservation
- Ministry of Environment, Science, and Technology
- Ministry of Health and Population
- Ministry of Local Development

In addition to these are other stakeholders within the Government of Nepal. These include the Ministry of Industry, Commerce and Supplies; Ministry of Physical Planning and Works; Ministry of Finance; Ministry of Information and Communication; Ministry of Defence; Ministry of Women, Children, and Social Welfare; the Nepal Army, and the police force. Even within the main institutions listed above, there are several departments that play crucial roles in disaster preparedness and mitigation—the Department of Mines and Geology, and the Department of Water Induced Disaster Prevention being among them. Some of them are covered below in the section on implementation. Coordinating this extensive bureaucracy is not an easy task. Brief descriptions of the roles of the seven main institutions are given in the following passages.

The National Planning Commission

The Prime Minister chairs the National Planning Commission (NPC). It has a vice-chairperson and five members. The NPC is a planning body with jurisdiction over all ministries and public sector agencies and is empowered to formulate periodic and annual plans and oversee their implementation in an advisory capacity. The NPC examines the available resources and allocates them to different sectors as an input to the development budget. The different ministries, in turn, prepare and integrate the budget allocated by the NPC with inputs from field and other offices in a decentralised planning process. The budget is then presented for discussion to a joint committee of the Budget Division of the Ministry of Finance and the Secretariat of the NPC. The committee focuses its attention on those programme heads exceeding the amounts previously made available to the ministries.

The NPC functions under broad directives and guidelines given by the National Development Council (NDC). The main functions of the NPC are to draw up periodic plans according to the long-term goals and guidelines set by the NDC; to issue directives to the ministries about drawing up national development plans; to carry out research and collect data for drawing up the plans; to estimate the resources needed from both external and internal sources to finance the plans; and to monitor and evaluate development projects. Disaster management was discussed for the first time in the 10th Plan (NPC 2002).

Water and Energy Commission

The Minister for Water Resources chairs the Water and Energy Commission (WEC) which was established in 1976. It was reconstituted in January 1999 with broad-based representation from the secretaries of 11 ministries and five other members from outside the government. The WEC functions under broad directives and guidelines given by the National Water Resources Development Council (NWRDC) headed by the Prime Minister. Its functions are to review multipurpose, large- and medium-scale projects and recommend whether or not they should be implemented; to draw up policies and strategies for survey, research, and analysis in aspects of water and energy resources development according to government priorities; to analyse bi- and multilateral projects in the water and energy sectors, draw up policies for them, and evaluate them; to enact laws related to development in the water and energy sectors; and to coordinate between national and sectoral policies.

The Water and Energy Commission Secretariat (WECS) was established in 1980 to provide technical and administrative support to the WEC and carry out its decisions. It also works as the secretariat of the NWRDC. The government designated the WECS as the national water-planning unit. It functions as an advisory body to the Ministry of Water Resources. WECS formulated a National Water Plan in 2005 (WECS 2005).

Ministry of Home Affairs

The Ministry of Home Affairs (MoHA) is the national focal point for managing all natural disasters, and it does so through its 75 district administration offices. Formulation of national policies and their implementation, preparedness and mitigation of disasters, immediate rescue and relief work, data collection and dissemination, collection and distribution of funds and resources are vital functions of this Ministry (see Chart 1 on page 62, for its organisational structure) The Ministry has kept an account of losses caused by natural disasters all over the country annually since 1983 (Table 1).

MoHA is the key agency for immediate response during disasters rather than an agency for activities related to rehabilitation and prevention. The ministry is the nodal agency for the Central Natural Disaster Relief Committee (CNDRC), and is headed by the

Minister for Home Affairs. The committee has tiers at regional and district levels; viz, the regional natural disaster relief committees (RNDRCs) and district natural disaster relief committees (DNDRCs).

CNDRC and DNDRC are functional, whereas the other two RNDRC and community-level committees are constituted only during times of large-scale natural disasters. The CNDRC, chaired by the Minister for Home Affairs, is the apex committee responsible for formulating policies and plans regarding overall aspects of disaster management in coordination with other key disaster actors.

To operate rescue, relief, and rehabilitation activities effectively and efficiently in times of disaster, a Central Disaster Relief Fund and a District Disaster Relief Fund have been established.

CNDRC carries out rescue and relief work in disaster-affected areas; protects and helps reduce the loss of life and property; mitigates suffering; rehabilitates victims of disasters; facilitates control and mitigation of disasters; raises funds for relief materials and distributes them; raises awareness about disasters; coordinates disaster management agencies; mobilises rescue and relief assistance from the non-government sector; forms teams for relief work; assesses damage, collects and analyses data, and disseminates useful information about disaster management.

The disaster management section of the Ministry of Home Affairs (MoHA) is principally responsible for looking after disaster-related activities, but has very few staff and relies heavily on the help of the chief district officers (CDOs) for information about disasters in the 75 districts. Each CDO is the chief administrator in the district and also the head of the District Natural Disaster Relief Committee (DNDRC).

Ministry of Water Resources

The Ministry of Water Resources (MoWR) is responsible for the formulation of policies, plans and programmes related to irrigation; prevention of water-induced disasters; and the electricity sub-sectors. Detailed responsibilities include drawing up policies and plans to develop, manage, and conserve water resources; promoting, constructing, operating, and maintaining irrigation, hydropower, and river training and multipurpose projects; preparing budgets for project implementation annually and periodically; monitoring and evaluating projects; promoting private sector development of electricity; and negotiating multi- and bilateral agreements on use of water resources.

The ministry has three departments: the departments of Electricity Development (DoED), Irrigation (DoI), and Water Induced Disaster Prevention (DWIDP). Nepal Electricity Authority is a public utility that also operates under the general guidance of

the ministry. The DWIDP is responsible for controlling and mitigating the problems of water-induced disasters such as landslides, debris flows, and floods.

Ministry of Forest and Soil Conservation

The Ministry of Forest and Soil Conservation (MoFSC) is concerned with the development, management, and protection of watersheds. It has five departments, of which the Department of Soil Conservation and Watershed Management (DSCWM) is responsible for controlling and regulating floods and landslides in order to protect soil erosion (DSCWM). The department is empowered to prohibit unauthorised blocking, diverting, or storing of water in any river or stream by any means or for any purpose in protected watershed areas under its jurisdiction.

Ministry of Environment, Science and Technology

The Ministry of Environment, Science, and Technology (MoEST) is responsible for the development of available traditional technology and transfer of appropriate technology for the development of the country. Its responsibilities also include research on energy, including alternative energy. The Department of Hydrology and Meteorology (DHM), which functions under the ministry, is responsible for collecting, processing, and publishing data on hydrology and climate, crucial for the planning and development of water resources, agriculture, and for early warning about and mitigation of floods.

Ministry of Health and Population

The Ministry of Health and Population (MoHP) is responsible for making plans, programmes, and policies for the health sector. It directs the Department of Health Services to undertake special training to deal with problems related to public health arising from natural disasters at the central level, so that the department is fully prepared to handle the situation with minimum loss of lives in the event of a natural disaster (MoH 2003).

In 2003, the Epidemiology and Disease Control Division of the then Ministry of Health (later the Ministry of Health and Population) produced a 'Health Sector Emergency Preparedness and Disaster Response Plan for Nepal' with a disaster analysis, management framework, and planning guidelines (MoH 2003). They received help from the World Health Organization (WHO) in technical and logistics aspects for this endeavour. The document covered strategies and definitions and proposes two disaster response approaches:

- i) for frequent, manageable emergencies, and
- ii) for infrequent catastrophic emergencies.

The Plan also discusses hazards already experienced and the impacts noted. The hazards taken into account include earthquakes, floods, epidemics, fires, and conflict situations. The health impacts are dealt with in some detail and the final sections deal with planning guidelines and response activities as well as overall coordination and partnerships. This document was to be revised, but so far there has been no revision.

Institutions at the implementation level

Several departments are primarily responsible for executing or implementing plans and programmes in disaster preparedness. These departments are also responsible for providing policy feedback on disaster preparedness to the respective ministries. They are as follows:

- Department of Water Induced Disaster Prevention
- Department of Soil Conservation and Watershed Management
- Department of Hydrology and Meteorology
- Department of Irrigation
- Department of Health Services
- Department of Mines and Geology

Department of Water Induced Disaster Prevention (DWIDP)

Among the donor countries, Japan has played a meaningful role in providing material support and institutional capacity building in Nepal. In 1991, the Water Induced Disaster Prevention Training Centre (DPTC) was established with the assistance of the Japanese International Cooperation Agency (JICA). Its establishment was a joint undertaking of various government agencies with the MoWR as the lead agency.

Assistance was provided through JICA until 1999. During this period, Japan provided a building for DPTC and a hydraulic model laboratory in Godavari some 15 km south of Kathmandu; this laboratory was working concomitantly on river training and 'sabo' (a term used in Japan for activities related to river and soil conservation measures).

Thanks to the continued support of JICA, the training centre became the Department of Water Induced Disaster Prevention (DWIDP) in 2000, capable of handling disasters caused by floods, landslides, and debris flows. It is the focal agency for all water-induced disasters.

Before the establishment of the DWIDP, the Department of Irrigation (DoI) used to undertake river training work through its River Training, Environment, and Mechanical Division at the Department and district irrigation offices throughout the 75 districts of Nepal. The responsibility for river training has now been transferred from this division to the DWIDP. The DWIDP has seven divisions and five subdivisions throughout the various districts of Nepal.

Although exclusive river training work is carried out by the DWIDP, the DoI continues to carry out river training to protect the hydraulic structures used for canal diversion and conveyance and the command area.

The mandate of the DWIDP falls into four categories.

Rescue and rehabilitation

- Supporting the activities of the District Natural Disaster Relief Committee (DNDRC)
- Carrying out rehabilitation work
- Coordinating the involvement of government and non-government agencies in relief and rehabilitation activities

Emergency protection

- Carrying out work identified by DNDRC
- Providing local technology, machinery, and other resources of its divisions and subdivisions for emergency protection work
- Involving government and non-government agencies in emergency protection and increasing awareness among local beneficiaries

Regular maintenance

- Executing regular maintenance work in coordination with the district irrigation and river training committees
- Providing technical support, machinery, equipment, and construction materials for landslide control and flood protection
- Increasing the involvement of local technicians and beneficiaries and coordinating the agencies involved in regular maintenance work

Implementation of central-level master plans

- Carrying out research activities on landslide control and flood protection and preparing flood and landslide hazard maps for Nepal
- Carrying out construction work
- Coordinating stakeholders to implement activities related to water-induced disasters
- Increasing public awareness and involvement in water-induced disasters
- Reclaiming land eroded by rivers and carrying out development activities on reclaimed land

The organisational structure of DWIDP is presented in Chart 2 on page 63.

Department of Soil Conservation and Watershed Management

The Department of Soil Conservation and Watershed Management (DSCWM) is one of five departments under the Ministry of Forest and Soil Conservation. It was established in 1974 and currently has 840 staff in total, with 128 graduate and 349 undergraduate technical personnel from various disciplines. It has district level offices in 55 districts of Nepal. The organisational structure of the DSCWM is given in Chart 3 on page 64.

The mandate of DSCWM is as follows.

- Ensuring proper land use by means of rational land-use planning
- Implementing integrated package programmes, based on sub-watersheds as planning and management units, to include biological, agronomic, and water-management measures to tackle erosion problems
- Ensuring multiple uses of land and water to fulfil diverse needs
- Operating soil conservation and watershed management (SCWM) programmes in line with the integrated watershed management approach
- Establishing linkages and networking with all other related sectors; e.g., forestry, agriculture, livestock, water, and land resources
- Ensuring people's participation by developing appropriate technologies and through conservation extension, education, and demonstration
- Adopting ways and means of keeping damage to the environment at a minimum during construction of development infrastructure
- Protecting watersheds near hydroelectric dams, irrigation systems, and river banks through plantation and other conservation techniques
- Expanding and institutionalising SCWM services in all districts of Nepal
- Focusing conservation activities on the Siwalik range and on other marginal lands

Department of Hydrology and Meteorology

The Department of Hydrology and Meteorology (DHM) is under the Ministry of Environment, Science, and Technology. The central organisation has four divisions and three basin offices at field level, namely, Koshi Basin, Narayani Basin, and Karnali and West Rapti Basin, covering activities throughout the nation. The department operates 154 river-gauging stations and maintains a nationwide network of 337 precipitation stations, 25 sediment stations, 68 climatic stations, 22 agro-meteorological stations, 9 synoptic stations, and 6 aero synoptic stations (Adhikari 2004). The organisational structure of the department is presented in Chart 4 on page 65. The following are its mandates.

- Collecting and disseminating hydrological and meteorological information for water resources, agriculture, energy, and other development activities (Adhikari 2004)
- Issuing hydrological and meteorological forecasts for the public, mountaineering

- expeditions, and civil aviation, as well as for the mitigation of natural disasters
- Carrying out special studies for policy-makers and for the development of hydrological and meteorological sciences in the region
 - Promoting relationships between the DHM and other national and international organisations in the field of hydrology and meteorology

Department of Health Services

The Department of Health Services (DHS) provides services through 75 district health offices, a number of health posts, and health centres in the districts. District health offices dispatch health teams during disasters to provide first aid for the wounded. The DHS acts to control the epidemics that occur after a disaster hits an area.

Local government institutions

Nepal has 75 district development committees (DDCs), 3,913 village development committees (VDC), and 58 municipalities. These are local-level government institutions empowered by the Local Self Governance Act 1999 to coordinate development activities under the leadership and guidance of the Chief District Officer (CDO) who is the representative of the central government in the district. The CDO acts as a crisis manager during natural disasters. These local-level institutions play a significant role in mobilising the community for disaster mitigation activities such as flood mitigation and river control at local level.

Non-government organisations

Several national and international non-government organisations (INGOs) are working in the field of disaster management in Nepal. The International Red Cross Society, Practical Action, CARE Nepal, OXFAM, and Action Aid are international non-government organisations actively involved in this field. INGOs working in Nepal have been providing resources to local NGOs, enabling them to run their organisations on a professional basis. A list of international organisations actively involved in the field of disaster management in Nepal is presented towards the end of Chapter 7, and those working on pilot projects on Disaster Preparedness for the European Commission's Humanitarian Aid Department's (DIPECHO's) promotion of preventative measures (community-based disaster risk management in Nepal) along with NGOs in Nepal are covered at the end of this chapter. Some of the NGOs actively involved in disaster management in Nepal are described in the following sections.

Action Aid Nepal

Action Aid Nepal is a country office of one of the United Kingdom's biggest INGOs. It was established in Nepal in 1982 and has a strong focus on advocacy and empowerment of the poor and disenfranchised.

It commenced its contribution to disaster reduction by running disaster and risk education in schools and communities. Its goal in disaster risk reduction is both prevention and response to emergencies. It seeks to address vulnerability and hazards by increasing the capacity of poor, excluded, and vulnerable groups in collaboration with appropriate institutions.

The methodology it uses is training with the help of local NGOs and women's groups focusing on disaster response training in schools and communities.

Danish Christian Aid

Danish Christian Aid (DCA) is a core member of the Lutheran World Federation (LWF) (see the end of this chapter). It has been involved in disaster preparedness and response along with LWF almost since LWF's establishment in Nepal in 1984. Besides work related to refugees and internally displaced people, it has valuable experience in disaster response and relief. Currently DCA is involved as a DIPECHO partner in piloting programmes on increased capacity to respond to disasters and improved livelihoods. This work is being carried out in Jhapa, Rautahat, Lalitpur, Kathmandu, and Bhaktapur.

CARE Nepal

Cooperation for American Relief Everywhere (CARE) started working in Nepal in 1978. At that time the focus was on agricultural extension and improving infrastructure. In the early 1990s the emphasis changed to community-based development of 'human infrastructure' and led to activities in capacity building, training, and empowerment.

CARE's focus in disaster management is enabling the poor to survive and recover from disaster. It works with partners at multiple levels to ensure that poor communities are prepared for and can be assisted during natural disasters. CARE is currently working on a project to pilot disaster risk management among socially and economically marginalised communities in Sarlahari, Mahottari, and Dhanusha. The long-term aim is to strengthen the communities' resilience to disasters.

Nepal Red Cross Society

Established on August 4, 1963, Nepal Red Cross Society (NRCS) is one of the main local NGOs working in coordination with MoHA. During natural disasters, it works closely with the Central Natural Disaster Relief Committee headed by the Minister for Home Affairs. It is also one of the few organisations with a countrywide network that can cope with problems on a national scale. At present, it has a nationwide network with 75 district chapters, 816 sub-chapters, 316 cooperation committees, and 3,515 Junior Youth Red Cross Circles (JYRCC). Its interface relationship with MoHA is given in Chart 5 on page 66.

Preparedness and relief measures include both pre-and post-disaster activities, and NRCS implements community-based disaster preparedness programmes in 35 districts of Nepal. It has established 27 warehouses at strategic locations to deliver relief and emergency items, and the society has played a commendable role in the major disasters occurring since its establishment (Devkota 2004; Dhakal 2005). NRCS is currently piloting a community-based disaster preparedness programme as a response to national disasters with the help of the experiences of the Belgian and Danish Red Cross.

National Society for Earthquake Technology

The National Society for Earthquake Technology-Nepal (NSET-Nepal) is a non-government organisation active in dealing with earthquake preparedness and mitigation. It was established in Kathmandu in 1993 and is the only organisation of its kind in Nepal.

NSET-Nepal has been working in the field of earthquake safety and preparedness with a mission to assist all communities in Nepal to prepare to mitigate the impact of earthquakes by implementing organised approaches to managing them and minimising risks. Its vision is earthquake-safe communities in Nepal by 2020.

NSET-Nepal was awarded the Certificate of Merit Sasakawa Award for Disaster Reduction in 2001 and the Tech Museum Award 2004 for its meritorious performance in the field of earthquake preparedness.

NSET-Nepal has been carrying out various projects and programmes (Annex 3) in earthquake preparedness with the support of internal and external agencies.

Jalshrot Vikash Sanstha

Jalshrot Vikash Sanstha (JVS) – Association for Water Resource Development, Nepal – is a non-government, non-profit organisation established in 1999 and works in the field of water resource development. It helps formulate policies on integrated water resource management (IWRM) and works as the Nepal Water Partnership (NWP) office, a local-level institution of the Global Water Partnership (GWP).

JVS was involved in the study of community approaches to flood management in Nepal with financial support from the World Meteorological Organization (WMO). The organisation prepared a manual on community approaches to flood management as part of a regional project that involved Bangladesh, India, and Nepal. The manual was field tested in the Banjaraha VDC of Rautahat district, one of the study areas, during the floods of 2004 and 2005. The involvement of the community in flood management was reported to be very encouraging.

National Centre for Disaster Management

The National Centre for Disaster Management (NCDM) is a fairly new, local non-government organisation established in 2002. It is run by an executive committee of nine members drawn from different disciplines. Members include a geologist, an engineer, a disaster specialist, a medical doctor, a journalist, a police officer, a training specialist, an economist, and an administrator, thereby forming a multi-disciplinary team.

NCDM firmly believes that helping to empower people and improve the capacity of local communities to prepare for and manage disasters through training and awareness are the most effective ways of mitigating the effects of natural disasters. It has held three workshops in 2003, 2005, and 2006 on pre-monsoon disaster preparedness plans. It has also prepared emergency preparedness plans for international non-government organisations such as Oxfam, CARE Nepal, GTZ, and the UNDP. At present, it is working on disaster policy and a legal framework for the government.

Nepal Landslide Society

The Nepal Landslide Society (NELS) is also a fairly new local NGO established in 2003. NELS was established following a number of landslides along the Prithvi Highway which inspired the promoters to do something about landslide mitigation. It went on to hold seminars/workshops and an international conference in September 2005 on landslides with a view to pooling as much knowledge in the field of landslide mitigation and control as possible (NELS 2005).

NELS is run by a seven-member executive committee of dedicated people with ample knowledge of specific local sites with vulnerabilities to landslides. It believes that hazard mapping of the most vulnerable sites should be undertaken on a priority basis. Disaster preparedness plans for landslides should then be formulated and subsequently launched, then work should commence on less vulnerable sites

Nepal Geologic Society

The Nepal Geologic Society (NGS) is a local NGO formed mainly by Nepalese geologists with a view to creating awareness about natural disasters, especially landslides and earthquakes in Nepal.

Until 2000, NGS organised a natural disaster reduction day annually on the occasion of the International Decade for Natural Disaster Reduction (IDNDR). It organises seminars on natural disasters and awareness-raising programmes in the community. Now NGS is organising a day on International Strategies for Disaster Reduction (ISDR) every year, during which it carries out programmes to raise awareness about natural disasters in the community.

NGS has held national meetings and seminars on various topics related to natural disasters in collaboration with the Ministry of Home Affairs, IDNDR National Committee of Nepal, DWIDP, Lutheran World Service, Nepal, and the National Society for Earthquake Technology (NSET-Nepal).

Natural Disaster Management Forum

The Natural Disaster Management Forum (NDMF) was established in 2002 as a non-profit, non-government organisation devoted to helping people who have been suffering from hydroclimatic disasters. It believes that mitigation of natural disasters is best done through sustainable management of natural resources with the involvement of local communities. It is also engaged in the study of environment and natural resource management.

This organisation has been working with victims of disasters and helping them at the time of crisis since its establishment. It is also working with Action Aid Nepal and other I/NGOs on hydroclimatic disaster issues. NDMF has a branch office in Dhanusha.

Friends Service Council Nepal

Friends Service Council Nepal (FSCN) is a non-profit, non-political, and non-government organisation established in 1992 and working in socioeconomic development at the grassroots level in Nepal. It has a head office in Lalitpur and a field office in Rupandehi district, in the southwest part of Nepal. Its aims are to fight poverty and injustice by improving the socioeconomic condition of the poor and disadvantaged. It is affiliated with the Social Welfare Council (SWC) and the NGO Federation of Nepal (NFN).

FSCN is an active local NGO in Nepal and disaster management is one of several of its prominent activities at the community level.

Disaster Preparedness Network Nepal

Disaster Preparedness Network Nepal (DPNeT) was established in 1996 as a non-profit forum of individuals and organisations involved in disaster management and financed by membership fees. It is run by an executive committee of nine members.

DPNeT acts as a resource and information centre and a contact point for agencies and individuals working in disaster management. It aims to create effective linkages between government and civil society and enable communities by building capacities in disaster preparedness. Its methods involve promoting indigenous knowledge, replicating best practices, and organising workshops and seminars to share information on disaster management.

Academic institutions

Institute of Engineering

The Institute of Engineering (IoE) is the oldest engineering institution in Nepal. It offers Bachelor and Master's level courses in different disciplines. IoE has produced engineering professionals and many of its graduates work in the field of disaster management. The Institute offers a course on disaster mitigation management as part of a Master's degree course in Water Resources Engineering. The Centre for Disaster Studies (CDS), which is in the IoE, has prepared a curriculum for disaster mitigation study with the help of DWIDP's Disaster Mitigation Support Project (DMSP) funded by JICA.

Nepal Engineering College

Nepal Engineering College (NEC), located in Changu Narayan, Bhaktapur, is a private engineering college established in 1994. Among other courses, a course on disaster risk management was introduced in 2003 as an elective subject for the undergraduate course leading to the Bachelor of Engineering degree. NEC is also involved in disaster management research.

NEC frequently organises seminars and workshops on disaster preparedness and mitigation. So far it has organised five national-level seminars and workshops in the field of disaster management with the help of Ehime University of Japan. In May 2006 and with the help of Ehime University, it established a Centre for Disaster Risk Studies within the College. This centre is involved in the study of causes and effects of natural disasters such as floods, landslides, and earthquakes.

International organisations

ICIMOD

The International Centre for Integrated Mountain Development (ICIMOD) was established in 1983 to serve poor mountain communities in the Hindu Kush-Himalayan region. As a centre operating at an interface between research and development, ICIMOD has from its inception, been involved in addressing various aspects of mountain disasters such as floods and landslides. It ran a well-documented training course on mountain risk engineering which became an accepted programme on mitigation in many of the premier engineering institutes in the region.

Today ICIMOD continues to build on its substantial contributions to capacity building by providing credible information and technical assistance aimed at prevention and mitigation of landslides, floods, and flash floods (ICIMOD et al. 2001; ICIMOD and WMO 2002). ICIMOD hosts several websites and portals dedicated to topics such as

GIS, space technology, and disaster preparedness. It also facilitates the sharing of knowledge and information on its disaster portal www.disasterpreparedness.icimod.org. Further, ICIMOD also facilitated the sharing of precipitation and river discharge data among five countries through its website www.southasianfloods.icimod.org which is dedicated to improving regional cooperation in sharing flood-related data.

Lutheran World Federation

The Lutheran World Federation–Nepal Programme (LWF-Nepal) was established in 1984 as the country programme of the international LWF Department for World Service which operates relief, rehabilitation, and development programmes in 37 countries. In Nepal programmes are implemented through NGOs and community-based organisations. LWF has a field office in Jhapa where it works with Bhutanese refugees. It also has a coordination unit in Banke district, and a liaison and coordination office in Kathmandu. Committed to responding to the cause of human suffering, it is a strong partner in programmes for disaster mitigation and management among the poorest communities. Its programme has a strong emphasis on emergencies, refugees, and internally displaced people.

Oxfam

The acronym ‘Oxfam’ stands for the Oxford Committee for Famine Relief. Oxfam was founded in Britain in 1942 during the Second World War, when a group of Oxford citizens campaigned for grain ships to be sent through the allied naval blockade to provide relief for women and children in enemy-occupied Greece. Oxfam International was founded in 1995 by a group of like-minded, independent non-government organisations which wanted to work together internationally to achieve greater impact in reducing poverty and providing relief during emergencies through their collective efforts.

Oxfam has been working in humanitarian disaster and emergency situations for over 60 years. It was established in Nepal before the inception of Oxfam International and, as such, was one of the earliest INGOs in the country. Currently it is promoting small-scale mitigation projects in Kapilvastu, Nawalparasi, and Mahottari districts. Its approach is through Dalit empowerment as an avenue for decreasing vulnerability to floods. Oxfam is supporting the Government of Nepal in drafting a new National Disaster Management Act and a National Disaster Management Policy.

Practical Action

Practical Action is a UK-based INGO with 40 years experience in developing countries. In Nepal it works through a locally-established counterpart. Its focus is on establishing the use of appropriate technology by demonstrating and disseminating knowledge and influencing decision-makers.

Practical Action is currently piloting demonstrations of early warning systems (EWS) for floods and landslides in selected VDCs of Chitwan and Nawalparasi districts. Communities are being trained to manage the systems and to establish physical structures (e.g., dikes) and evacuation measures. It is foreseen that communities will be empowered to manage through their own committees and to raise and manage their own finances in the long term (Jaishy 2005).

UNDP

UNDP Nepal has been involved for over two decades in the national-level disaster management sector in Nepal. It has a wide multi-hazard perspective, especially in relation to the Kathmandu Valley, and its role is seen as that of an advisor to national policy-making bodies. UNDP is currently supporting the Ministry of Home Affairs in the development of a national strategy for disaster management.

UNICEF

UNICEF is the United Nations Children's Fund. Over the years it has built a body of expertise in infant immunisation and vitamin supplements, childhood nutrition, drinking water supplies, and emergency relief—especially for women and children. In the context of its expertise in drinking water supply it is working on a project in Lalitpur in the Kathmandu Valley to supply safe drinking water following a possible major earthquake.

Other INGOs

There are other international organisations involved in disaster preparedness and mitigation activities and programme in Nepal. Among them are the following:

- Asian Disaster Preparedness Centre (ADPC)
- Asian Disaster Reduction Centre (ADRC)
- United Nations Office for the Coordination of Humanitarian Affairs (UN/OCHA)
- World Food Programme (WFP)
- Save the Children Fund (SCF)

Other actors

There are other actors involved in implementing measures to mitigate disasters. They are often overlooked when new organisations arise, but continue to play a crucial role. The Department of Mines and Geology, for example, is the oldest department to have carried out research on earthquakes. Another associated institution, which deserves mention is the Department of Geology at Tribhuvan University which offers a course for engineering geologists on mountain risk engineering.

The cities and townships of Kathmandu Valley also have their own disaster management plans and reserves. Many older, voluntary social service organisations such as Lions and Rotary clubs, which, although not specifically established for disaster management, nevertheless play a much-needed role in providing relief materials when needed. It is worth adding that, whereas prevention of disasters is closely related to the state of the environment, the Environment Protection Act and the Forest Act have played roles in raising awareness about the relationship of the environment and natural endowment of the country to disaster mitigation and management.

Conclusion

In examining the roles of the various departments and organisations involved in disaster planning and preparedness in Nepal and their past performance, rescue and relief operations stand out as something for which Nepal has an edge over neighbouring countries. Where it seems to lack is in actual planning for preparedness before a disaster. This will be examined in the following chapters.

