

# Country Profile: Nepal<sup>1</sup>

## Disaster Risk Management: Policies and Practices in Nepal

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### Abstract

Nepal is exposed to multiple recurrent hazards. The country falls in the top 20<sup>th</sup> list of the most multi-hazard prone countries in the world. The country is ranked 4<sup>th</sup>, 11<sup>th</sup> and 30<sup>th</sup> in term of climate change, earthquake and flood risk respectively. Other major disasters in Nepal are landslide, fire, drought, epidemic, storm, hailstorm, avalanches and GLOF.

Nepal loses more than 300 lives every year due to water induced disaster. During the period of 1971 to 2007, more than 50,000 people have been reported injured; about 27,000 deaths were recorded, which reveals a persistent threat to huge loss of human lives due to natural disasters. This accounts for an average death of more than two people every day. The economic cost associated with natural disasters has increased tremendously in each episode of the calamity.

Legislatively, disaster management initiatives have been governed under Natural Calamity (Relief) Act, 1982. This Act authorizes the government to form a Central Natural Disaster Relief Committee being chaired by the Minister of Home Affairs at the central level. Regional Natural Disaster Relief Committee at regional level and District Natural Disaster Relief Committee at district level. Ministry of Home Affairs is working as a nodal agency of disaster risk management in Nepal. Importantly, the government has adopted National Strategy for Disaster Risk Management (NSDRM), 2009 based on Hyogo Framework for Action and this new strategy encompasses prevention, mitigation, preparedness, response and recovery.

Disaster Risk Reduction (DRR) and Climate Change Adaptation have become national priority and being institutionalized to support sustainable development in Nepal. The 10<sup>th</sup> Five Year Plan (2002-2007) and the Three-Year Interim Plan (2007-2010) emphasized DRM as an integral component of sustainable development and accorded priority to pre-disaster preparedness.

Ministry of Home Affairs has established a National Emergency Operation Centre (NEOC) at national level and planning to expand it in all development regions within next five years. The Ministry of Home Affairs with support from the World Bank has prepared country level Multi-Hazard Risk Assessment. The different hazards including the assessment are earthquake, flood, drought, landslides and epidemic. The Early Warning Strategy has been prepared and will be

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<sup>1</sup> *Disclaimer: This report was compiled by an ADRC visiting researcher (VR) from ADRC member countries. The views expressed in the report do not necessarily reflect the views of the ADRC. The boundaries and names shown and the designations used on the maps in the report also do not imply official endorsement or acceptance by the ADRC.*

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instrumental in developing framework for installation, operation and maintenance of early warning system for major hazards floods, landslides, GLOFS and drought throughout the country.

A National Platform for DRR has been formed with the involvement of multi-stakeholders. The government has established disaster risk management focal desk and appointed officials in different Ministries and Departments to synergize DRR efforts into the works of the relevant line agencies.

## **1. General Information of Nepal**

### **1.1. General Background**

Nepal is a mountainous country, located in central part of the Himalayan belt. It is situated between the latitudes of 26'22"to 30'27"north and the longitudes of 8004'to 880012" east. It covers a landmass area of 1, 47,181sq km. It spreads 145 to 241 Kilometres from north to south and 885 kilometres from east to west. It is located in South Asia occupied only 0.01 percent of the total landmass of the Earth. The country borders to north by People's Republic of China and to the south, east, and west by the Republic of India.

### **1.2. Geography**

Nepal is characterized by rugged topography, variable climatic conditions, complex geological structure with active tectonic process and continued seismic activities. The elevation of the country rises from 70 m. in Terai to 8848 m. Mount Everest in the north within a short horizontal distance of 145 to 241 Kilometres. Such a sharp vertical landscape renders the country highly vulnerable to potential water induced disasters like landslide, slope failure, soil erosion and debris flow. Nepal is divided in three geographical regions- Himalayan, Mountain Hill and Plain Terai, in terms of topography from north to south. The Himalayan region covers 15%, Mountain Hills 68% and the plain Terai 17% of the total area.

### **1.3. Administrative Division**

Nepal was declared a federal republic in 2008. The country is still in the process of creating a new federal republic constitution and concluding the peace process. Up to day for development and management purposes, Nepal is administratively divided into 5 Development Regions, 14 Zones, and 75 Districts. There are 3,913 Village Development Committees and 58 Municipalities.

### **1.4. Demography**

The country has approximately 26.6 million populations with annual growth rate of 1.4 percent average (Population Census 2011). Nepal is the 41st most populous, 93rd largest country by landmass and 115th largest economy of the world. It has diversity with several race, caste, tribes, rituals, ethnicity, religion and languages. That means Nepal is multilingual, multicultural, multireligious, and multiethnic society. Nepal is diverse linguistic heritage evolved from four major languages groups – Indo Aryan, Tibeto Barmen, Mangolian, and Indigenous language isolates. Nepal is a garden of 102 ethnic, 92 linguistic and 6 religious people living with the social harmony and unity. The Nepalese population is consists of indo Aryan and Mongol races. Religiously, the overwhelming populations are Hindus (80.6%) followed by Buddhist (10.7%), Islam (4.2%), Kirat

(3.6%), Christians (0.5%) and the others (0.4%). In March 2008 Nepal is declared as a secular state.

### **1.5. Socio-economic**

Nepal's life expectancy at birth is 64.1 year (UNDP, 2010) and adult literacy rate (15-24 years) is 86.5 per cent (CBS, 2009). Net enrolment rate in primary education is 93.7 per cent (DOE, 2009). Population below poverty line is 25.2 per cent (CBS, 2011). Human Development Index of Nepal is 0.458 (UNDP, 2011). Annual GDP growth rate of Nepal is estimated 3.5 per cent in 2009 (Economic Survey 2010). Inflation rate is 13 per cent. Total GDP for the year 2010 is estimated US \$ 15.108 billion (Global Finance) of which, Primary sector (Agriculture , Forest and Fishery) contribute around 34 per cent, secondary sector ( also called Industry sector) contribute around 14 per cent and Tertiary sector ( also called service sector) contribute around 51 per cent of the total GDP ( Economic Survey 2010). GDP per capita in current price estimated for 2010 is US \$536 (Global Finance). 86 per cent of the total foreign trade comprises of imports and remaining 14 per cent are exports, which results huge trade deficit in the economy (Economic Survey 2010).

### **1.6. Climate**

Nepal has five climatic condition /zones from subtropical to arctic broadly corresponding to the altitudes. The tropical and subtropical zone lies below 1200 meters, the temperate zone 1200 to 2400 meters, the cold zone 2400 to 3600 meters, the subarctic zone 3600 to 4000 meters, and the arctic zone above 4400 meters. Nepal has four major seasons comprises winter (December-February), spring (March-May), summer (June-August), autumn (September-November). Monsoons become active from June to mid September which brings about 80 per cent of the rainfall during that period. Rest of the seasons usually becomes dry. Spring and autumn are the most pleasant seasons. In winter temperature drop to freezing with a high level of snow fall in the mountains.

## **2. Disaster Profiles in Nepal**

### **2.1. Natural Hazards**

Nepal has fragile geology and steep topography make 20th topmost disaster prone country in the world. Among 200 countries, Nepal ranks 4th, 11th and 30th with regard to relative vulnerability to climate change, earthquake and flood hazards respectively. It faces high magnitudes and intensities of a multitude of natural hazards such as flood, landslide, earthquake, fire, hailstone, windstorm, thunderbolt, cloudburst, drought, Glacier lake outburst flood (GLOF), avalanches and epidemics. These are the contributing factors to disaster vulnerability in Nepal.

- Geological, ecological and hydro meteorological phenomena
- Demographic, such as rapid population growth and increasing population density
- High degree of environmental degradation particularly deforestation
- Fragility of landmass
- Wider spread poverty
- Topography which poses huge infrastructural challenge

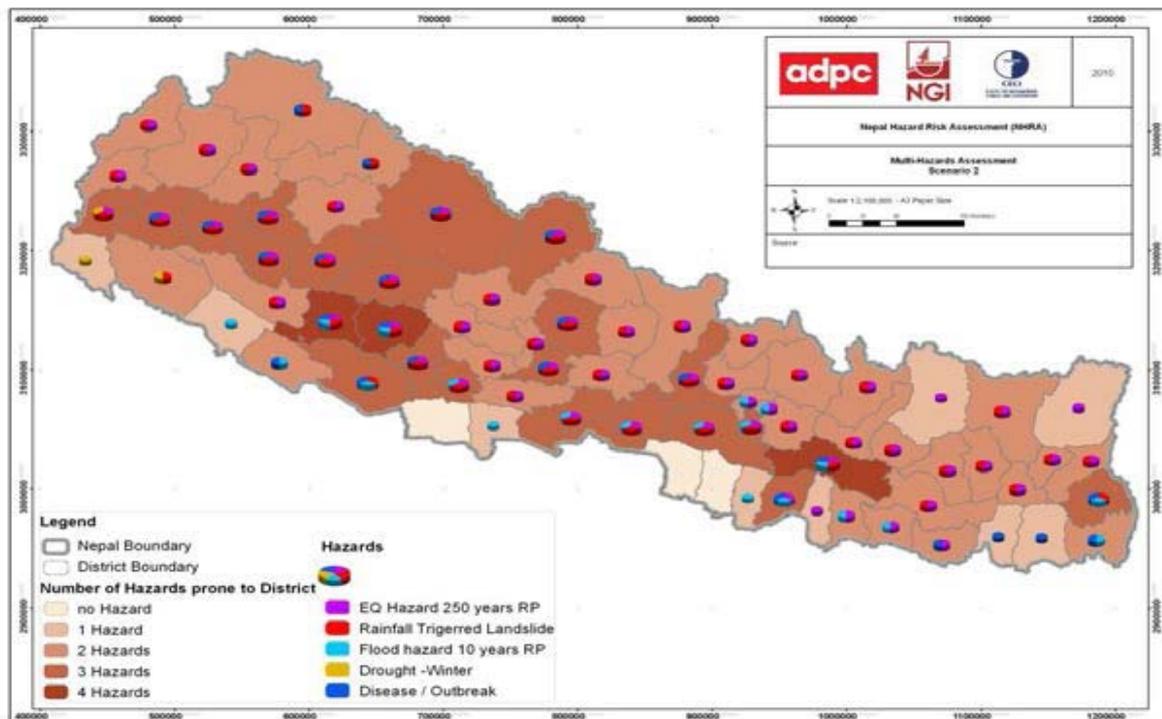
- Poor building practices and no enforcement of building codes and unplanned city development
- Insufficient emergency preparedness and lack of awareness
- Political instability and conflict

**Year wise disaster scenario Loss of lives by major types of disasters in Nepal (2000-2011)**

year	Flood & landslide	Earth-quake	Thunder-bolt	fire	Hails-tone	Wind-storm	epidemic	avalanche	total
2000	173	0	23	53	1	2	141	-	393
2001	196	1	39	26	1	1	154	-	418
2002	441	0	3	14	0	3	0	-	461
2003	232	0	42	16	0	20	-	-	310
2004	131	0	10	10	0	0	41	-	192
2005	141	0	18	28	0	0	34	21	242
2006	141	0	17	28	1	0	34	-	221
2007	216	0	35	34	18	1	9	9	322
2008	134	0	14	11	0	2	10	0	171
2009	135	0	7	35	0	0	462	2	641
2010	201	0	39	42	0	2	34	2	320
2011	269	6	95	46	2	6	9	0	433

(Source: MoHA)

**Overall hazard profile of Nepal**



(Source: Nepal Multi-hazard Risk Assessment Report)

## **2.2. Landslide and Debris flow**

The movement of earth, rock or debris down slope under the influence of gravity by certain processes is called landslide. Landslide usually occurs as secondary effects of heavy rainfall and earthquakes. A debris flow is slurry of soils, rocks and organic matter combined with air and water. The causes of landslide in Nepal are natural as well as manmade. In general the middle hills are prone to landslides. The natural phenomena like heavy rainfall, active geotectonic movements, deforestation and disturbance of hill slopes are also the major causes for occurring landslides.

## **2.3. Floods**

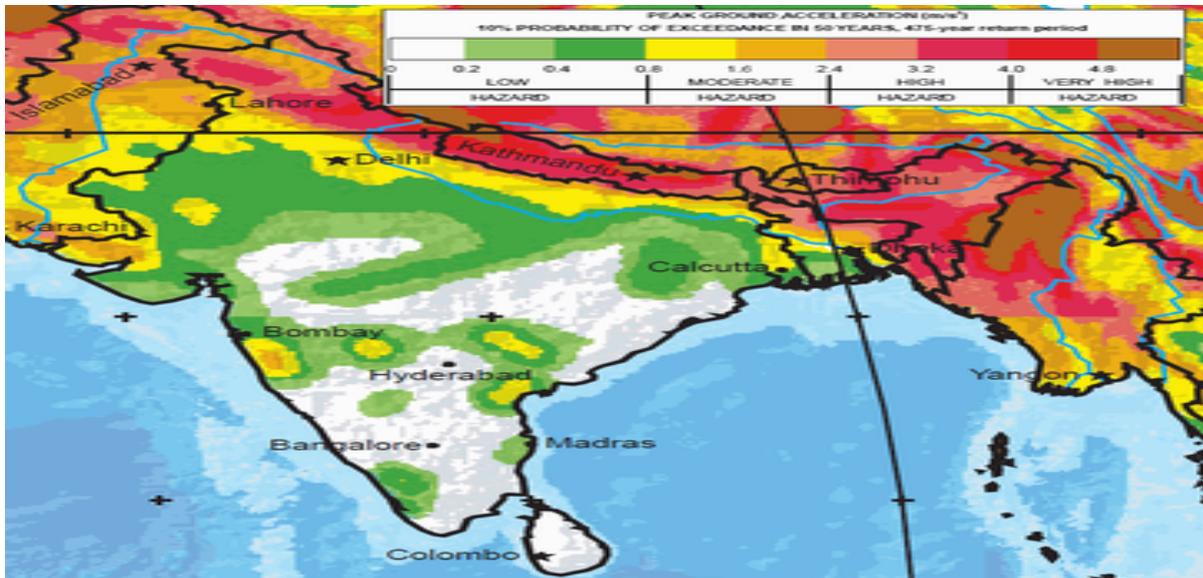
The topographical feature of Nepal is mainly responsible for flood. Flood is caused by heavy precipitation which may occur at any place except high Himalayan region during the monsoon season. Inundation along the river banks and erosion of land along the riverbanks causes loss by damaging irrigation and communications facilities and fertile lands across or adjacent to the riverbanks. Such phenomenon's have caused loss of lives and property in mountainous areas of Nepal and have posed severe hazards to physical infrastructure like roads and bridges. Inundations have disrupted social and economic development of many parts of terrain region in the country. The floods of August 2008 in Koshi river, September 2008 in Western Nepal and July and August 1993 in the Bagmati and other rivers were the most devastating floods in Nepal. Nepal has observed Monsoon flood as well as Flash flood. Rainfall variability (unequal rainfall in time and space), topography (steep Mountain and flat Tarai), Deforestation (decreasing vegetative cover) are the major factors contributing to the floods in Nepal.

## **2.4. Earthquake**

The Nepalese people are living in a country of highest seismic hazard, have faced the consequences of many earthquakes including those of great earthquakes. 45 million years ago, the Indian continent collided into Southern Tibet. The Indian continent is driven under Tibet, pushing lightweight sediments upwards and thus the formation of the Himalayas. Nepal sits across the boundary between India and southern Tibet which are still moving towards each other by 2 meters per century. This movement creates pressure within the Earth, which builds up and can only be released through earthquakes. This is the only way earthquakes can happen in Nepal. Earthquakes happen very often in Nepal. Based on the seismic record of the number of earthquakes that occurred since 1255, earthquakes of magnitude greater than 8 occurred on average once every 80 years. The last great earthquake of magnitude 8.3 occurred in 1934. The seismic record of Nepal is available since 1255 AD in which 7.7 reactor scale in Kathmandu valley king Avaya Malla and one third of population lost their lives in this event. After that, a series of earthquake occurred in Nepal. Major are in 1260, 1408, 1681, 1767, 1810, 1823, 1833, 1834, 1866, 1934, 1980 and 1988 AD. According to the seismological center of Nepal medium and small size earthquake event occur in a different part of Nepal frequently. According to Global earthquake Initiatives, Kathmandu is exposed to the greatest earthquake risk per capita among 21 megacities around the world, largely due to building collapse and insufficient preparedness

and medical care. If an earthquake of the 1934 magnitude is reported at this point of time, an estimated 40,000 death, 90,000 injured and 6, 00,000 to 9, 00,000 homeless can be expected.

### Earthquake hazard profile of Nepal



### 2.5 Fire

Fire is a recurring disaster in Nepal. During the dry season from February to May, large numbers of incident of fire are reported, mostly in the Terai where about three quarter of houses are built with thatched roofs.

Forest fires occur throughout Nepal and result deforestation of around 1.7 per cent of the total forest area annually. These fires cause economic losses and environmental degradation throwing dedicates ecosystems out of balance. It is also threatening valuable and endangered flora and fauna, degrading the soil and inducing flood and landslide.

Most of the fire incidents are caused by negligence of the people. Hunting practices, negligence by cigarette smoker, intentional fire to accelerate growth of grasses to feed livestock, intentional fire setting by herb and charcoal collectors and children playing with fires are some of the reasons for forest fires. Certain type of trees especially Sal (shores Robusta) is particularly susceptible to fire. About 86 per cent of the population of the country inhabit in the rural areas mainly in thatched houses closely clustered where fire hazards are likely to be common.

### 2.6. Glacial Lake Outburst Flood (GLOF)

Glacial lakes are like natural water reservoirs dammed by ice or moraines. Lake outburst can be triggered by several factors: ice or rock avalanches, the collapse of the moraine dam due to the melting of ice buried within, the washing out of fine material by springs flowing through the (piping) earthquakes or sudden inputs of water into the lake e.g. through heavy rains or drainage from lakes further up glacier. ICIMODs 2001 inventory of glaciers, glacial lakes and GLOFs counted 3252 glaciers and 2323 glaciers lakes in Nepal 20 of which are very vulnerable to flooding (MoHA, 2009).

GLOF affects high Himalayan region as well as downstream by extremely damages of lives and properties. Major events shown in past were Tamor Koshi (1980), Sun Kosi (1935, 1981), Dudh Kosi (1977, 1985), Arun (1968, 1969, 1970) etc.

### **2.7. Drought**

In Nepal, most of the country is in the grip of drought-like condition from the end of March till the monsoon arrives next in June, but the districts like Manang and Mustang in the Trans-Himalayan region are extremely dry throughout the year and the Terai and western hills are more frequently affected than other regions. Drought results in crop failures and famine, both during the monsoon season and rest of the year, when winter crops are sown.

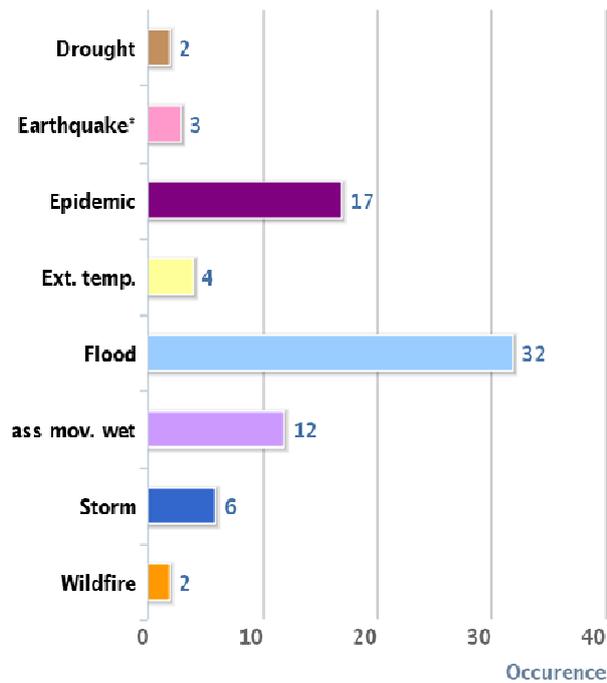
About 5,000 families living in pockets in the hills and Terai are badly affected by drought each year (MoHA, 2009). Planned land use with crop rotation, rain water harvesting, drought monitoring, using recycle water, developing irrigation system, water rationing are some of the strategy which help to minimize impact of drought.

### **2.8. Others**

About 300 people died in June and July month of 2009 in Midwestern part of the country. by the epidemic of diarrhea ( MoHA 2010) and other disaster are drought, hailstone, thunderbolt, avalanche, boat capsize, structure collapse, cold wave, hot wave, swine flu, bird flu, encephalitis, meningitis is common during hot and rainy season. The lightening, hailstorm are other natural disaster. The sudden avalanche and heavy snow fall in winter season sometimes cause heavy loss of human lives and properties. Road accident and Aircraft accidents are also major source of disaster in Nepal. In Nepal, road accidents are one of the top ten causes of death. Aircraft accidents are more common in hilly terrain and areas with extreme climatic condition.

### **An Overview of Natural Disasters in Nepal from 1980 - 2010**

- No of events: 78
- No of people killed: 11,112
- Average killed per year: 358
- No of people affected: 5,165,810
- Average affected per year: 166,639
- Economic Damage (US\$ X 1,000): 1,351,229
- Economic Damage per year (US\$ X 1,000): 43,588



(Source: Prevention web)

A scenario of past disastrous events during 1980-2010 reveals that epidemics, landslides and floods take the largest toll of life every year, and urban or rural fire are the principal hazards in terms of their extent and frequency of occurrence as well as the spread and intensity of physical and socio-economic impacts. Earthquake is a major potential hazard to reckon with – the country is located on an active seismic belt and the exponential urbanization trend over the past decade with general disregard of earthquake-resistant measures in building construction is the cause of ever-increasing earthquake risk.

### 3. Legal Arrangement

#### 3.1. Natural Calamity (Relief) Act, 1982

NCRA 1982 is a milestone legal instrument for disaster management in Nepal. The act was formulated in 1982 and amended in 1989 and 1992. According to NCRA 1982, Natural Disaster means earthquake, fire, storm, flood, landslide, heavy rain, drought, famine, epidemic, and other similar natural disaster. The Act also includes industrial accident or accidents caused by the explosions or any other kinds of disaster.

Similarly, the Act defines Natural disaster relief work as “any relief work carried out in the area affected or likely to be affected by the natural disaster in order to remove the grief and inconvenience caused to the people, to rehabilitate the victims of the natural disaster, to protect the public property and life and property of the people, to control and prevent the natural disaster and to make advance preparation thereof”.

According to the Act, the provision has been made to set up different institutions from centre to local level to arrange relief and rescue works during the emergency. There has been a provision of Central Natural Disaster Relief Committee (CNDRC) with Relief and Treatment sub-committee

and Supply, Shelter and Rehabilitation sub- committee at the centre level as an apex body of disaster management in Nepal. There is also provision of a Regional Natural Disaster Relief Committee (RDRC), District Natural Disaster Relief Committee (DDRC) and Local Natural Disaster Relief Committee (LDRC). Among those institutions CNDRC and DDRC are very much active all the time, but two subcommittees and RDRC and LDRC could not be functioning as per the stipulated manner.

The Act also empowers the government to the state of emergency during the intensive disaster. It also furnishes some special rights to the disaster manager for managing rescue and relief work in an effective and efficient manner. It also empowers the government to allocate for dedicated fund at central to local level as a Disaster Relief Fund for delivering effective relief and rescue during the disaster.

### **3.2. Local Self Governance Act, 1999**

The Local Self Governance Act (LSGA) empowers local bodies to govern themselves and recognises that local people and local bodies are the most appropriate points of entry to meet development needs at the local level. The LSGA authorizes to undertake certain functions with respect to DRR by local bodies. Some provisions have been made to establish Environment Protection Fund and Disaster Management Fund at DDCs, VDCs and Municipalities. Control of natural calamities, prevention of infectious disease and epidemics, operation and management of fire brigades, developing mitigating and preventive measures against landslide and floods are some of the assigned task that local bodies can pursue by using the legal authority granted by the LSGA.

## **4. Policies and Programmes**

### **4.1. National Strategy for Disaster Risk Management (NSDRM) 2009**

The NSDRM was promulgated in 2009. This strategy has been developed on the base of Hyogo Framework for Action (HFA) 2005. A detailed process was adopted during the preparation of the NSDRM, 2009. Multiple occasions were organised to solicit the view of governmental, non-governmental agencies, local bodies, academic institutions, private sector, UN agencies, INGOs, and civil society organisations

The long term vision of the strategy is to develop Nepal as a disaster-resilient community. It has also a mission to provide guidance and ensure effective disaster management through development and implementation of the concept of effective preparedness for mitigation, disaster risk reduction and incidence of calamities.

Besides this, the strategy has been adopted the following directive principles for disaster risk management.

Mainstream DRR concept into the development plan

Ensure life safety and social security

Give emphasis to gender and social inclusion

Adopt decentralize process of implementation

Follow the holistic approach

Give priority to staff safety and security

Follow one-window policy and cluster approach in implementation of DRM

Work in the spirit of participation, interaction, and coordination

The strategy has been framed on the foundation of five priority actions of HFA 2005. In addition, 29 activities have been identified within the priority areas. Realizing that disaster management is a multidimensional and multi-sectoral responsibility, sectoral strategies have also been adopted. Those sectors are broadly divided into nine areas, which are Agriculture and Food Security, Health, Education, Shelter, Infrastructure and Physical Planning, Livelihood Protection, Water and Sanitation, Information, Communication, Coordination and Logistics, Search and Rescue and Damage and Need Assessment.

The strategy has also proposed new institutional arrangement for disaster management which entail the formation of a National Disaster Management Council (NDMC) being chaired by Prime Minister. Besides, it also envisions National Disaster Management Authority (NDMA) as a secretariat of the council where other three committees under the council for preparedness, rescue and relief and reconstruction and rehabilitation activities.

The strategy realizes that disaster management is possible only through integrated, participatory, and collaborative involvement of all partners. As such due importance is given to UN agencies, donor community, inter-governmental agencies, I/NGOs, and people from different segments of civil societies.

#### **4.2. Flagship Approach on Disaster Risk Reduction**

An International Consortium was formed in May 2009 to support the Government of Nepal to develop a long term Disaster Risk Reduction Action Plan building on the National Strategy for Disaster Risk Management (NSDRM). 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. In addition, the Consortium initiated a multi-stakeholder participatory process with the Government of Nepal and civil society organizations to identify short to medium term disaster risk reduction priorities that are both urgent and viable within the current institutional and policy arrangements in the country.

Based on the priorities set by the government and also discussions with multi-stakeholder groups, five flagship areas of immediate action for disaster risk management in Nepal are as follows:

- School and hospital safety- structural and non-structural aspects of making schools and hospitals earthquake resilient,
- Emergency preparedness and response capacity

- Flood management in the Koshi river basin
- Integrated community based disaster risk reduction/management
- Policy/Institutional support for disaster risk management

The estimated total budget of the three-year Flagship Programmes is US \$131.1 million.

In developing the programme, the priorities outlined in the 'Hyogo Framework of Action 2005-2015, Building the Resilience of Nations and Communities to Disasters', and the Outcomes of the Global Platform for Disaster Risk Reduction (2009), which sets out specific targets for reducing losses from disasters, were taken into account.

On 19 March 2010 the Government formally established the Nepal Risk Reduction Consortium (NRRC) Steering Committee, chaired by the Secretary of Home Affairs. Members include the Joint Secretaries of the Ministries of Finance, Education, Irrigation, Local Development, Physical Planning, Health and Population, and the National Planning Commission. Directors and Representatives of the ADB, WB, UNDP, OCHA, IFRC, NRCS, and DP-Net are also members. The Joint Secretary of MoHA is Member Secretary.

#### **4.3. Periodic Plans**

Disaster Management Programs was first included in the 10th national plan (2002-2007) of the government of Nepal. Chapter 17 emphasized on the irrigation and water induced disaster control, where as chapter 22 deals on population, environment and natural and human induced disaster management. Both chapters reiterate the priority on policy formulation, strengthening institutional mechanism, risk assessment, information collection and dissemination regarding the disaster management. Both chapters also emphasized on the low costs disaster resilience construction practices.

Similarly, the Three Year Interim Plan (2007/08-2009/10) devoted separate chapter (chapter 26) on natural disaster management. The interim plan emphasizes on policy formulation, strengthening institutional mechanism, EWS, coordinated approach for DRR and linking disaster management with climate change. It is hoped that this attempt would be a landmark in the history of Disaster Management.

The plan has set up its vision to minimize social and economic loss and damage caused by disasters. The main objective of plan is to promote the security of life and property from the impact of natural disasters through sustainable, environment-friendly and result oriented development by making disaster management practices efficient, competent, strengthened and effective.

Develop and apply environment-friendly systems in development and construction works, appropriate information flow and pre- disaster preparedness for the mitigation of risks of natural disaster, strengthen collaborative works between the government, non government and private sector for rapid response and recovery are the major strategies of the plan. The plan has listed the programs of formulation of national strategy, awareness raising, preparedness for effective

response and recovery, study and research, risk and hazard zone mapping, stockpiling of relief and rescue materials, and enhancement of involvement of local bodies.

Current 12th three year development plan (2010/11-2012/13) was also devoted separate chapter for disaster management issues. This plan addressed disaster management issues more comprehensively. 12th three year development plan set its disaster management goal to achieve goal of Hyogo Framework for Action by 2015. Long term goal of the plan is to develop disaster resilient Nepal. Moreover, mainstreaming disaster risk reduction, institutional and legal reform and preparedness for better response are the strategies of this plan.

#### **4.4. Other Laws and Policies**

- Soil and water conservation act, 1982
- Nepal building act, 2007 and Building Code, 1994
- Environmental protection act, 1996
- National agriculture policy, 2004
- National shelter policy, 1996
- National urban policy, 2006
- National water plan, 2005 and Water resource policy, 1993
- National water resource strategy, 2002
- Water induced disaster management policy, 2006
- Strategies related to health sector

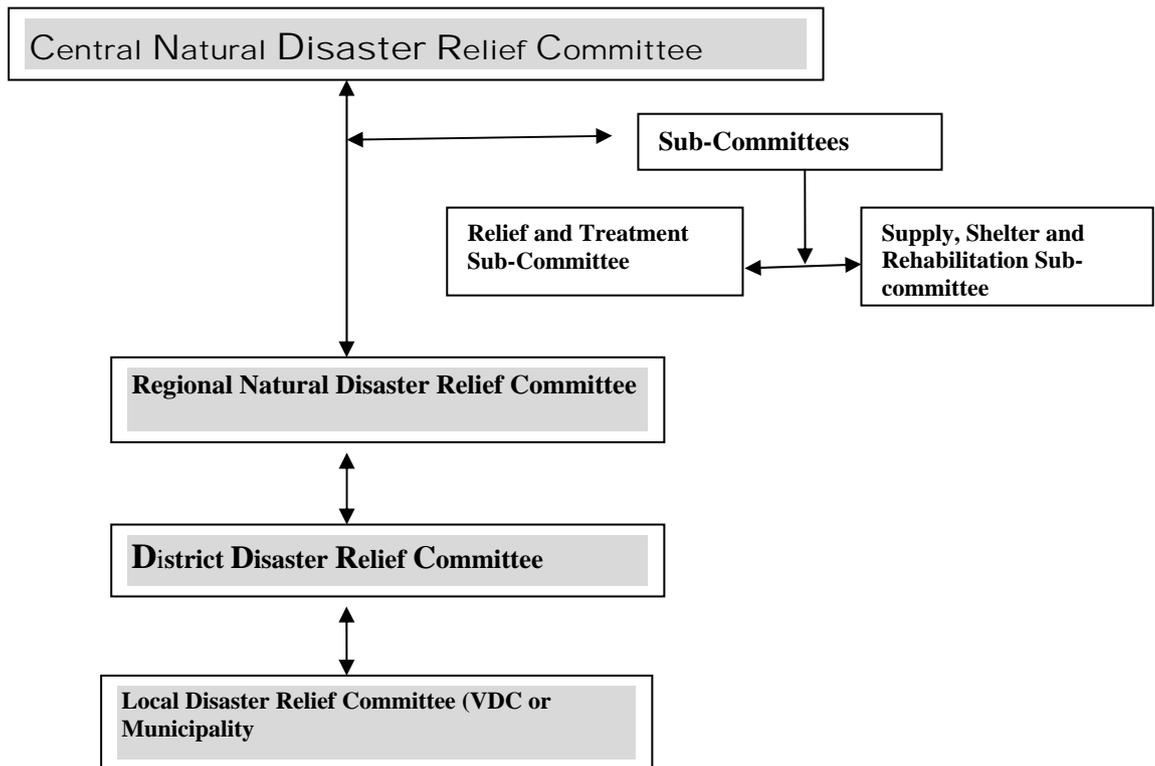
### **5. Institutional Mechanism**

#### **5.1. Ministry of Home Affairs**

Ministry of Home Affairs (MoHA) acts as National Focal Agency on Disaster Management and lead agency responsible for implementation of the Natural Calamity (Relief) Act, 1982. The MoHA is also responsible for rescue and relief work, data collection and dissemination, as well as collection and distribution of funds and resources. The assigned task has been implemented through Disaster Management Section and National Emergency Operation Centre under the leadership of Planning and Special Service Division of the Ministry.

#### **5.2. Central Natural Disaster Relief Committee (CNDRC)**

CNDRC is chaired by the Home Minister and includes related ministries and security agencies along with voluntary organizations such as NRCS. CNDRC is responsible for preparing national policies on preparedness, response and recovery and ensuring their implementation, stockpiling relief and rescue materials, collecting and disseminating relief materials and fund during emergency, give direction to the district and local committees for the execution of relief work. To support the functioning of CNDRC, there is Sub-committees of Relief and Treatment, and Supply, Shelter and Rehabilitation.



### 5.3. Regional Disaster Relief Committee (RDRC)

RDRC is present in all five regions of Nepal and is chaired by the Regional Administrator. It comprises related government agencies and security agencies (law and order, emergency response and development institutions) along with voluntary organizations such as Red Cross. It is responsible for supporting and monitoring the activities implemented by DDRCs and formulates regional and district level disaster management plan.

### 5.4. District Disaster Relief Committee (DDRC)

All 75 districts of Nepal have a DDRC. The chairperson is the Chief District Officer (CDO), who is the highest-level government official to take disaster-related decisions. It comprises various line agencies such as law and order, emergency response (police and armed police), district chapter of NRCS and critical facilities such as irrigation, road, livestock, health etc. The role of DDRC is to coordinate the local committees, formulate district disaster management plan, coordinate and operate relief work during emergencies and provide information to RDRC and CNDRC.

### 5.5. Local Disaster Relief Committee (LDRC)

The committee is responsible for disaster management at the local level, such as disbursement of funds during emergencies, and rescue and transport of the injured to hospitals.

### 5.6. Other Government Institutions Working on Disaster Risk Management

- Ministry of Irrigation
- Ministry of Defence
- Ministry of Energy

- Ministry of Physical Planning and Works
- Ministry of Environment
- Ministry of Local Development
- Ministry of Health and Population
- Ministry of Forest and Soil Conservation
- Department of Water Induced Disaster Prevention
- Department of Mines and Geology
- Department of Hydrology and Meteorology
- Department of Soil Conservation and Watershed Management
- Department of Irrigation
- Epidemiology and Disease Control Division
- Other government Ministries and Departments
- And Local Bodies

## **6. Progress of HFA in Nepal**

Nepal is a signatory country to HFA 2005. It has already expressed a commitment to achieve the HFA goals by 2015. So far, Nepal has submitted two HFA progress monitoring report. Nepal has achieved the following progresses which are also featured in HFA final report.

### **Strategic goal 1**

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

- The 10th five year plan (2002-2007) underscored that the main objective of DRR as to contribute substantially to make the public life secure by managing the natural and man-made disaster systematically and effectively.
- The 3-year interim plan (2008-2010) also emphasized that DRR is an integral component of sustainable development and is accorded priority to pre-disaster preparedness.
- National Strategy for Disaster Risk Management (NSDRM) 2009 has been adopted.
- Sixty Seven districts have disaster preparedness plans.
- At local level the 3-year interim plan (2008-2010) has envisaged to enhance the engagements of local bodies and communities in the prevention works.
- 3 municipalities have started implementing safe building construction practices using the seismic code provisions in the local context.
- Multi-Hazard Risk Assessment has been done which covers five major hazards.

### **Strategic goal 2**

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

- The Ministry of Home Affairs (MoHA) is the nodal agency for coordinating disaster management in Nepal.
- International coordination mechanism with relevant stakeholder's linkages has been developed at MoHA and strengthened to enhance the institutional capacity for implementing DRR activities in the country.
- NSDRM proposes High Level Council and Disaster Management Authority.
- Local Self-Governance Act (1998) which has initiated decentralization process and local bodies are delegated more authority, responsibility and resources.
- The government has established disaster risk management focal desk and appointed officials in concern ministries, departments.
- Cluster Approach has been adopted.
- Risk Reduction Consortium comprising of ADB, IFRC, UNDP, UNOCHA, UNISDR and World Bank has formed and identified five flagship areas of immediate intervention for DRR.

### **Strategic goal 3**

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

- Disaster preparedness and response workshop has been conducted at national, regional and district level with multi-stakeholders involvement.
- One window policy and cluster approach in emergency response has been successfully realized in dealing with different disasters in the past.
- For initial damage and loss estimation, a standard information collection process using Multi-Sectoral Initial Rapid Assessment (MIRA) has been practiced since 2009.
- 64 open spaces for evacuation during emergencies have been identified within Kathmandu valley.
- National Emergency Operation Center (NEOC) has been established at MOHA
- Hospital Preparedness for Emergencies (HoPE), Medical First Respondent (MFR) and Collapsed Structure Search and Rescue (CSSR) training are being given to Medical officers and security officers.
- Earthquake Simulation Exercise (INSARAG) has been conducted in 2009.
- Model agreement between GON and UN to expedite import/export and transit of relief consignments in the event of disasters and emergencies was signed on 31 May, 2007.
- A comprehensive Logistics Capacity Assessment of Nepal has been done.

## **Challenges for implementing HFA**

### **Mainstreaming DRR**

- The new development policy of Nepal acknowledges the incorporation of DRR into development plans. However, what is reflected and underscored in the plans is not substantiated in the annual programs and budgets.
- One of the reasons for this is lack of tools to assess contribution of an investment in development sectors towards disaster resiliency of a community and/or nation.
- A separate and robust mechanism is required in place to assess disaster resiliency of the project itself and also of its contribution toward disaster resiliency of a community.

### **Institutional strengthening and capacity building**

- The emergency response and relief approach is so entrenched in the current system that it will take time to mobilize the system to more comprehensive disaster risk management approach.
- The new policy and act - currently in pipeline- will be instrumental to gear up the efforts towards changing the existing mindset.
- The new policy and act will also authorize the government to arrange and mobilize sufficient budget with straight mechanism to spend on mitigation, preparedness and recovery.
- The new legal and policy frameworks are expected to empower the government to undertake preparedness of better emergency response in effective way.
- Although emergency response has been the main thrust of the disaster risk management in the previous years, it was basically 'wait and see' approach with spontaneous reactions to provide rescue and relief.
- SOPs have not been fully developed, institutional mechanisms are in need of strengthening
- There is need to develop network of EOC across the country from central to local level.

## **7. Conclusion**

It is encouraging to state that policy makers have realized that disaster risk management is a key to achieve sustainable development. First time in 10th Plan and since then DRM has been featured in national plan like Three Year Interim Plan 2007-10. After becoming signatory to HFA 2005, the government prioritized DRR in its development agenda and adopted National Strategy on Disaster Risk Management in 2009. The NSDRM, 2009 has clearly incorporated five priority areas as stipulated in HFA. A flagship approach has been introduced for immediate action for disaster risk management in Nepal.

National Emergency Operations Centre (NEOC) facilitates effective emergency management. National Platform on DRR has been formed to make DRR effort more cooperative and collaborative between governmental and non-governmental actors. DRR Focal desk has been instrumental for effective implementation of disaster risk reduction related policies and programs in relevant ministries, departments, security agencies and local bodies.

Although the MoHA has achieved some fresh progress on policy and institutional levels and still some are in the offing, there ahead lies a well implementation and smooth functioning of policies and programmes. Adequate resources, commitment, cooperation and collaboration are always needed to bring these policies and programs into fruition. Mainstreaming DRR in sectoral development, effective implementation of building code and building act, implementation of land use and settlement planning, changing mindset of the people, development and strengthening of effective institutions on DRR are some pressing issues in disaster management of Nepal.

## 8. ADRC Counterpart

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