



## NEPAL Country profile:

### **1) General information of Nepal**

Formal Name: The Federal Democratic Republic of Nepal.

Nepal is a landlocked country and the world's youngest republic. The establishment and declaration of a federal democratic republic is 28 May 2008 by the elected constitution assembly. Nepal has always been an independent and sovereign country with glorious history, culture and tradition that date back to time immemorial.

Nepal is characterized by a rugged topography, very high relief, variable climatic conditions, complex geological structure with active tectonic process and continued seismic activities. It is situated in central part of the Himalayan belt. It is situated between the latitudes of 26'22" to 30'27" north and the longitudes of 80'4" to 88'12" east. It covers a landmass area of 147,181 sq km and 4,000 sq.km Inland water bodies lakes, reservoirs, and rivers. It is located in south Asia occupied only 0.01% of the total landmass of the Earth. It is bordered on the north by People's Republic of China and on the south, east, and west by the Republic of India.

The elevation of the country rises from 60m tarai (Kechanakalan, Jhapa) to 8,848 m Mount Everest in the north within a short horizontal distance of 90 to 120 sq.miles. Such a sharp vertically renders the country highly vulnerable to potential water induced disasters like landslide, slope failure, soil erosion and debris flow etc. The mountains and hills of the country occupy about 83% of the total area whereas remaining 17% is covered by low and flat land stretching in the southern part of the country up to the Indian border.

It is commonly divided into the three physiographic areas: (1) the mountains and hills region situated in the great Himalayas range makes up the northern part of Nepal .It contains the highest elevation in the world including 8,848m (29028) ft. height Mount Everest (sagarmatha in Nepal) on the border of north Tibet, (2) the hills (pahad, mahabharat, chure, shiwalik) region about the small mountains and varies from 1,000 to 4,000 m (3,300-13,125ft.) in a altitude with subtropical to temperate climate depending on elevation, and (3) terrain the southern low land placing bordering India.

Nepal is administratively divided into five development regions, 14 zones, 75 districts, 58 municipalities and 3,913 village development committees. It is an ethnically diverse

country, with several races, castes, tribes, and rituals. 102 ethnic groups, 92 spoken languages and religious people are living with the harmony and united. The Nepalese population is consists of indo Aryan and Mongol races. The overwhelming major religions are Hinduism (80.6%), Buddhism (10.7%), Islam (4.2%), kirat Mundhum (3.6%), Christians (0.5%), and the others (0.4%) . In March 2008 Nepal is declared as a secular state.

The country has approximately 29 million (upto2008) populations with annual growth rate of 2.25% average. Nepal is the world's 41<sup>st</sup> most populous and 93<sup>rd</sup> largest country by landmass, and 115<sup>th</sup> largest economy of the world. Life expectancy rate about 64 years literacy rate about 68%. Net primary enrollment rate was 90% in up to 2008. The fertility rate in Nepal was 4.4% (2.1% in urban and 4.4% in rural). Crude birth rate was 33.58 on 1,000 of life births. Nepal is multilingual, multicultural, multi-religious, and multiethnic society. Nepal is diverse linguistic heritage evolved from four major languages groups – indo Aryan, tibeto barmen, mangolian, and indigenous language isolates. Urban population in the country comprises 16% of the total owing to migration from the mountainous to the plain or town.

As for economy of Nepal, Gross Domestic Product (GDP) for the year was estimated at over US\$12 billion (adjusted to nominal GDP) which entitles the 115th largest economy in the world. Agriculture comprises 41% of Nepal's GDP, and industry does 22%. Per capita income is less than US\$470. Nepal's exports are mainly carpets, clothing, leather goods, jute goods and grain. Import commodities are mainly gold, machinery, and equipment petroleum products and fertilizer.

Nepal has five climatic conditions/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 subtractic zone 3600-4000 meters, and the arctic zones above 4400 meters.

Nepal has four major seasons: 1) winter (December-February), 2) spring (March-May), 3) summer (June-August), and 4) autumn (September–November). Monsoons are from June to till mid-September and about 80% of the rainfall is brought during that period. Therefore the rest of the year is rather dry. Spring and autumn are the most pleasant seasons. Winter temperature drops to freezing with a high level of snow fall in the mountains. Summer and late spring temperature range from 28'c (83'f) in the hills region to more than 40'c (104'f) in the terrain. In winter, maximum and minimum temperatures in the terrain range from brisk 7'c (45'f) to mild 23'c (74'f). The central valley experience minimum temperature often falling below freezing point and a chilly 12'c (54'f) maximum. Much colder temperature prevails at higher elevations.

## 2) Natural hazards in Nepal

### 2.1 Natural Hazards likely to affect the Country

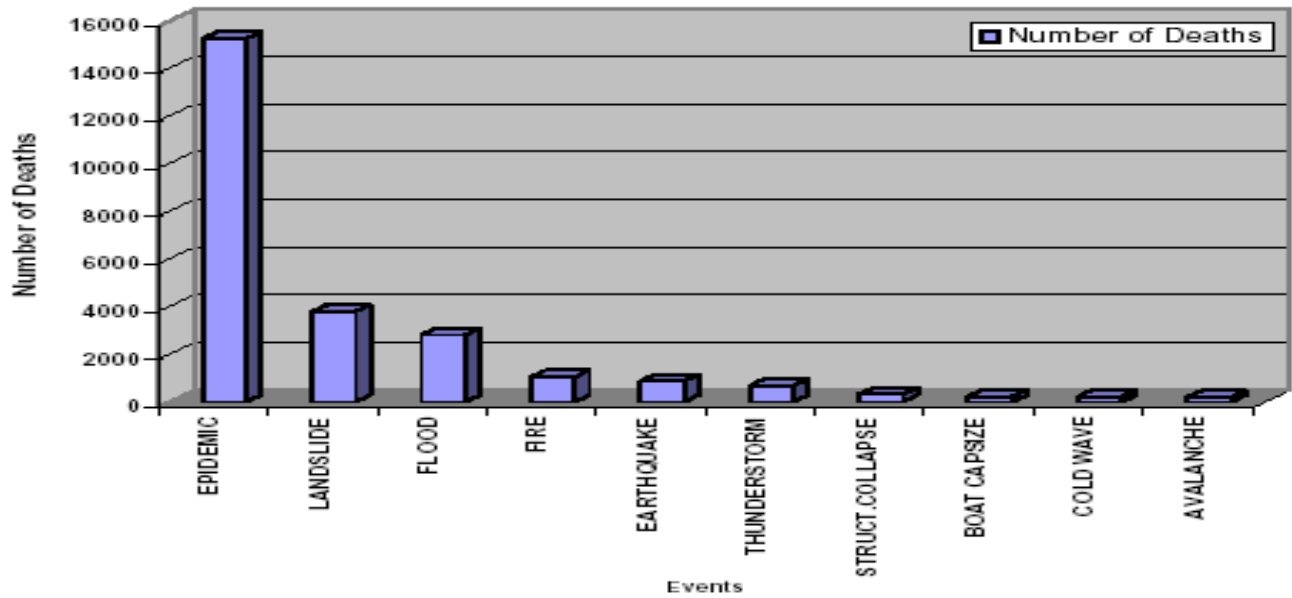
Flood, landslide, fire are the most frequent natural disaster in Nepal and this year epidemic of diarrhea also affected the country. These disasters occur almost every year in one part of the country the other causing loss of life and heavy damage to physical properties. Nepal has unfavorable natural conditions like fragile geology and steep topography make as one of the most disaster prone country in the world. It faces high magnitudes and intensities of a multitude of natural hazards such as flood, landslide, earthquake, fire, hailstone, windstorm, avalanches, thunderbolt, and Glacier lake outburst flood (GLOF), cloudburst, drought and epidemics.

### Year wise disaster scenario Loss of lives by major types of disasters in Nepal (2001-2007)

Source: Ministry of Home Affairs

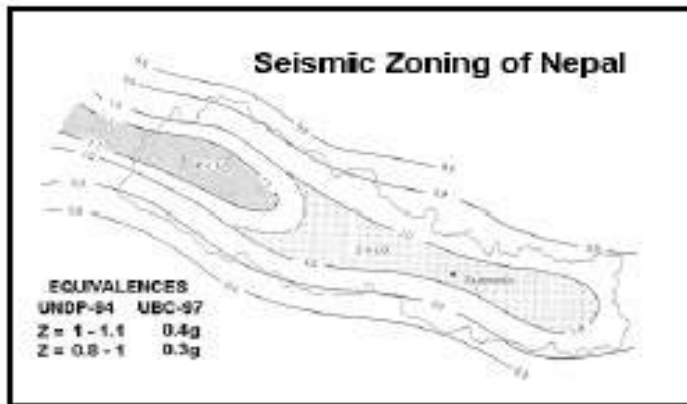
<u>year</u>	<u>Flood &amp;landslide</u>	<u>Earth- quake</u>	<u>Thunder- bolt</u>	<u>fire</u>	<u>Hails- tone</u>	<u>Wind- storm</u>	<u>epidemic</u>	<u>avalanche</u>	<u>total</u>
<u>2001</u>	<u>173</u>	<u>0</u>	<u>23</u>	<u>53</u>	<u>1</u>	<u>3</u>	<u>141</u>	-	<u>394</u>
<u>2002</u>	<u>196</u>	<u>1</u>	<u>39</u>	<u>26</u>	<u>1</u>	<u>1</u>	<u>154</u>	-	<u>418</u>
<u>2003</u>	<u>441</u>	<u>0</u>	<u>3</u>	<u>14</u>	<u>0</u>	<u>3</u>	<u>0</u>	-	<u>461</u>
<u>2004</u>	<u>232</u>	<u>0</u>	<u>42</u>	<u>16</u>	<u>0</u>	<u>20</u>	-	-	<u>310</u>
<u>2005</u>	<u>131</u>	<u>0</u>	<u>10</u>	<u>10</u>	<u>0</u>	<u>0</u>	<u>41</u>	-	<u>192</u>
<u>2006</u>	<u>141</u>	<u>0</u>	<u>17</u>	<u>28</u>	<u>1</u>	<u>0</u>	<u>34</u>	-	<u>221</u>
<u>2007</u>	<u>216</u>	<u>0</u>	<u>35</u>	<u>34</u>	<u>18</u>	<u>1</u>	<u>9</u>	<u>9</u>	<u>322</u>

### Ten Most Lethal Hazards in Nepal (1971 - 2005)

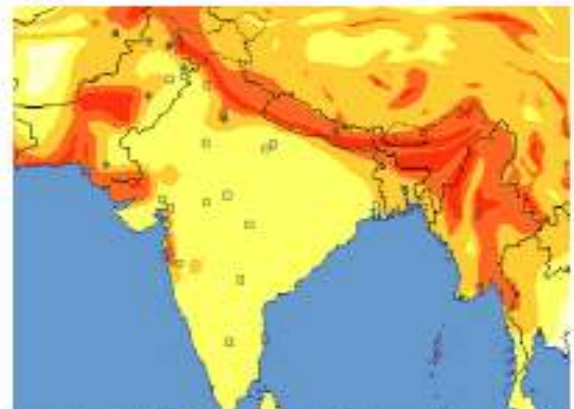


(Source: NSDRM, 2008)

### Seismic Hazard Map of Nepal



Source: Building Code of Nepal



Seismic Zone	Modified Mercalli Intensity	Peak ground acceleration (%)
Zone = 0	MMI = V	< 3
Zone = 1	MMI = VI	3 - 10
Zone = 2	MMI = VII	11 - 20
Zone = 3	MMI = VIII	20 - 35
Zone = 4	MMI = IX	> 35

Source: Munich re, 2001

### 3) The Major Disasters in Nepal

#### a) 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. The materials that compose landslides are divided into two classes, bedrock or soil (earth and organic matter debris). A landslide may be classified by its type of movement in the following: (1) falls: a fall is mass of rock or other material that moves downward by falling or bouncing through air. (2) Slides: sliding of rocks and debris results from shear failure (slippage) along one or several surfaces. (3) Topples: toppling of rocks takes place due to overturning forces that cause a rotation of the rock out of its original position. (4) Lateral spreads: lateral spreads involves spreading out horizontally large blocks of soil by fracturing off the original base. (5) Flows: flows move like a viscous fluid, sometimes very rapidly, and can cover several times. Water is not essential for flows to occur, however, most flows form after periods of heavy rainfall. Mudflow contains at least 50 percent of sand, silt, and clay particles. 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. Geomorphology of Nepal is very fragile and most of the parts of country fall under seismically active zone. 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.



Landslide in Ramechhap district, Nepal



Landslides at Krishnabhir Dhading Nepal

**b) Floods:-** Flood occurs when channel water overcomes the bank full discharge and water overflows to the land that is normally dry. Floods are naturally occurring hazards. A flood hazard is probability of occurrence of a flood of certain magnitude that will happen at a certain location within a specific period of time. They become disastrous when they affect the human settlements. The area immediate vicinity of the river banks has also potentiality of sedimentation from the flooding materials. 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 flood of august 2008 in Koshi river was the most devastating .The following types of floods are observed in Nepal: (1) Monsoon floods (2) Flash floods



Koshi flood 2008

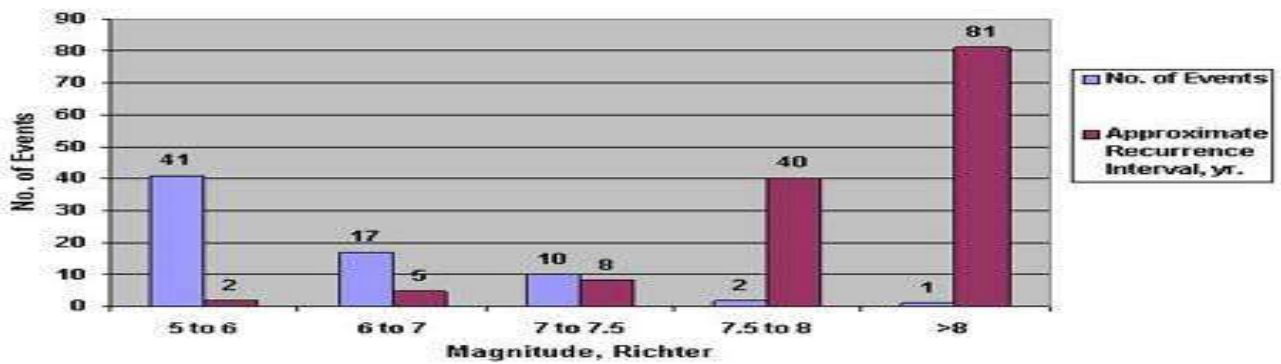
### c) Earthquake

The Nepalese people are living in a country of highest seismic hazard, have faced the consequences of many earthquakes including those of great earthquakes. Nepal 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.

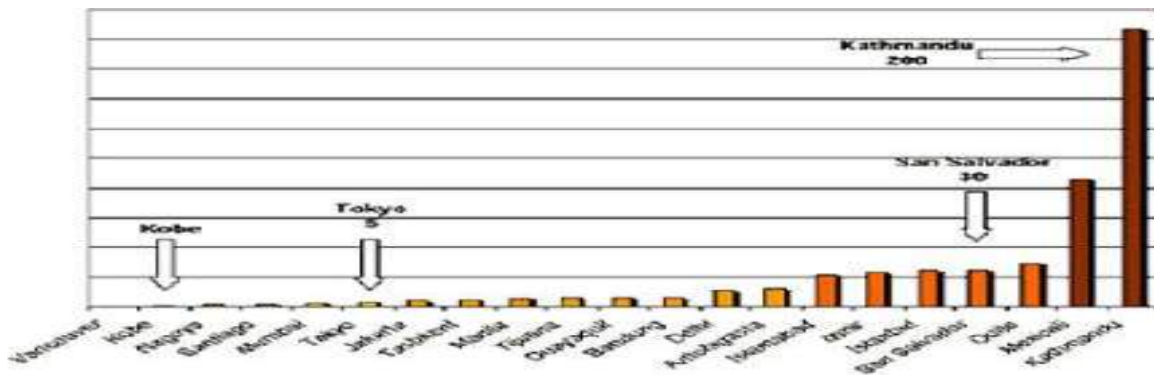


Earthquake (1934 and 1988)

**Magnitude-Frequency Data (1911-1991)**



In terms of the per capital risk, people living in the Kathmandu valley is 200 times more at risk than people living in Kobe, Japan. As explained in the graphical images below.



**Table 2: Direct Losses due to Earthquakes (1970-2003)**

Item	Number	Value of direct losses (NR)
<b>Total number of events</b>	<b>22</b>	
Death	876	
Injury	6,840	
Affected	4,539	
Buildings Destroyed	33,706	8,200,838,000
Buildings Damaged	55,234	1,309,606,450
Livestock death	2,215	11,075,000
Total loss at present value (NR)		9,566,605,507
Average loss per year due to earthquake		289,897,136

(Source: NSDRM, 2008)



#### d) Fire

Forest fires occur annually throughout Nepal and are a major cause estimated 1.7% deforestation annually. These fires cause economic losses and environmental degradation, throwing delicate ecosystems out of balance and threatening valuable and endangered flora and fauna, degrading the soil and inducing flood and landslides.

Most of the fire incidents are caused by neglecting the people. The interface between agriculture and forestry requires policies and approaches that transcend each economic sector. Hunting practices are responsible for 23% of forest fires in community forest, cigarette 19%, intentional fire to accelerate growth of grasses to feed livestock 18%, intentional fire setting by herb and charcoal collectors 8% and 5%, children playing with fire 8%, deliberately set for prevention 6-8%, unknown 4%. Certain types of trees, especially Sal (Shorea robusta), is particularly susceptible to fire. About 86% 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. Forest fires and house fires usually outbreak during dry season.

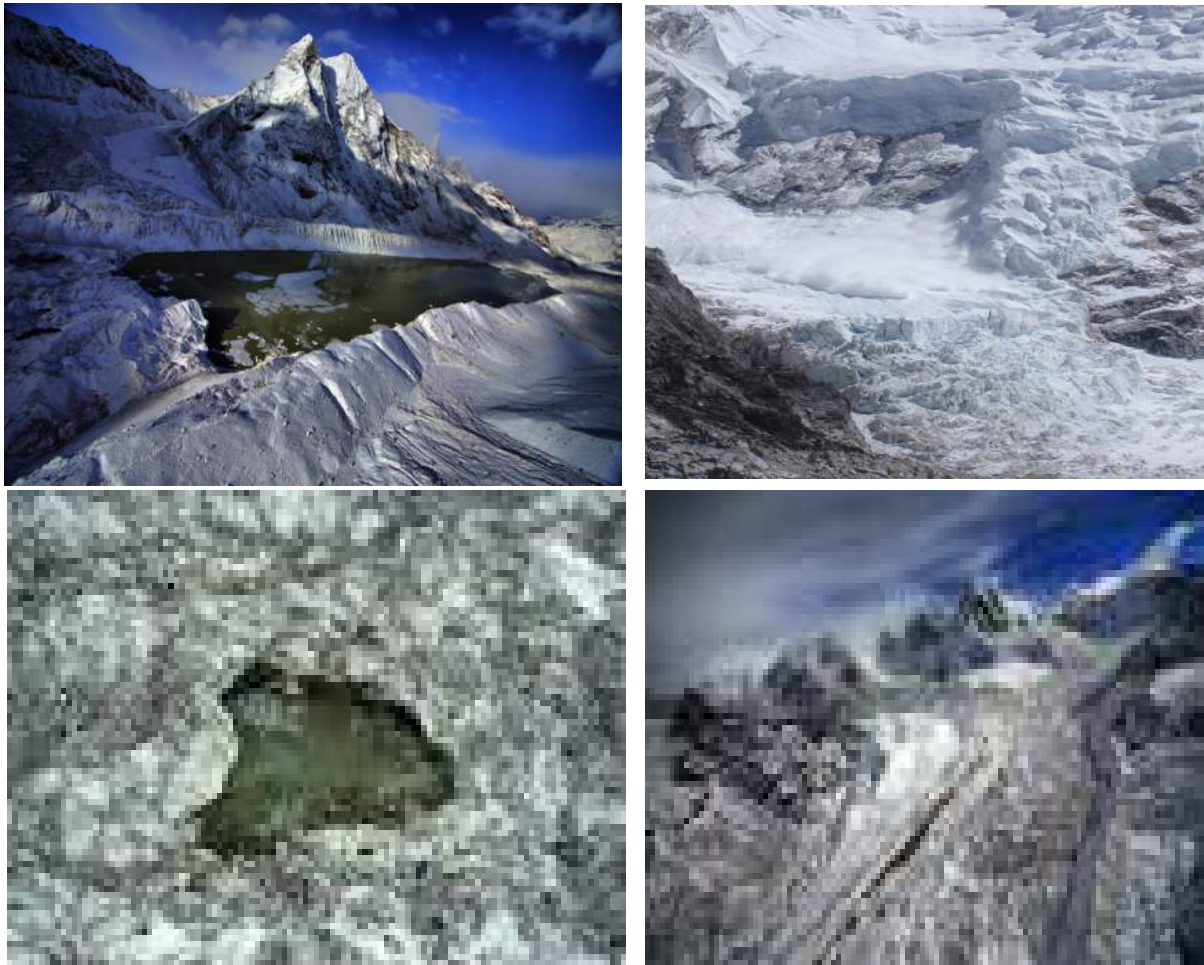


Fire in Bhutanese refugee camp 2008

### e) Glacier Lake Outburst Flood (GLOF)

Glacier lakes are like natural water reservoirs dammed by ice or moraines. A 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. Scientists from the United Nations Environment Program (UNEP) and International Centre for Integrated Mountain Development (ICIMOD) identified 3252 glaciers and 2323 glacier lakes in Nepal out of which they estimate around 20 to be potentially dangerous.

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. Now Tsho Rolpa and Emji Glacier Lake are in most vulnerable stage according to researcher.



Some glacier and glacier lakes in Nepal

## f) Others

In June and July 2009 Midwestern Nepal nearly 300 people died by the epidemic of diarrhea, and other disaster are drought, hailstone, thunderbolt, avalanche, boat capsized, structure collapse, cold wave, hot wave, swine flu, bird flu, encephalitis, meningitis is common during hot and rainy season. The lightning, hailstorm are other natural disaster. The sudden avalanche and heavy snow fall in winter season sometimes cause heavy loss of human lives and properties.

Table 3: Disaster Losses in Nepal during 1971 – 2006 (37 Years)

S. No.	Events	Death	Injury	Peoples Affected	Buildings destroyed	Buildings damaged	Land Loss (Ha)	Livestock Death	Reported Direct Loss (Million NRs)
1	DROUGHT	1	-	1,512	-	-	329,332	-	10
2	EARTHQUAKE	873	6,842	4,539	33,710	63	-	2,257	22.8337+50
3	EPIDEMIC	15,529	37,773	323,896	-	-	1	78	0
4	FIRE	1,081	735	218,128	62,634	2,762	352	113,922	6,244
5	FLOOD	2,864	349	3,315,781	70,115	1,041	196,955	31,117	3,713
6	FOREST FIRE	24	13	10,178	1,698	18	3,173	82	1,031
7	LANDSLIDE	3,899	1,188	480,069	16,779	1,209	21,797	9,046	835
8	OTHER	2,385	2,670	360,725	3,917	388	290,323	79,935	2,030
	<b>TOTAL</b>	<b>26,656</b>	<b>49,570</b>	<b>4,715,828</b>	<b>188,875</b>	<b>5,482</b>	<b>841,954</b>	<b>236,459</b>	<b>13,885</b>

Notes:

- 1 Epidemics means peoples seriously affected, hospitalized etc by epidemic events
- 2 The number "o" does not mean that the events were not occurred, it does mean the event is not reported.



Swine flu protection



bird flu in eastern region 2009



Drought in Nepal 2008

An scenario of past disastrous events during 1971-2008 reveals that epidemics, landslide and floods takes the largest toll of life every year, and urban or rural fire are the principle 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.

### **g) Recent major disasters in Nepal:-**

(1) Udaipur earthquake (august 1988) on 20 august 1988, a strong earthquake (m 6.7) occurred near the border of India killed 721, injured 6500, affected 301,016 with 22,000 houses completely destroyed, 22 district affected and loss 5 billion Rs. In properly damage and the risk could not be ignored anymore.

(2) Koshi flood 2008

Torrential rain that started in the beginning of august 17,2008 killed more than 20 and missing more than 50 injured 200, affected approximately 150000 thousand and 20000 household completely destroyed nearly \$3 billion in properly damaged and loss.

(3) Landslide (August 2007)

Floods and landslides triggered by torrential rains in August 2007 killed 203, affected 106,000 households, and 75,000 houses were either destroyed or damaged.

## **5) Disaster Risk Reduction Management system and Framework:**

### **A) System**

#### **Legal system**

Natural Calamity Relief Act, 1982 - the sole legal instrument to define disaster and reduce disaster risk

- Covers disaster mitigation measures to 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
- Set up for different institutions for disaster response
  - Central Disaster Relief Committee
  - Regional Disaster Relief Committee
  - District and Local level Relief Committees
- Funding arrangements for mobilization and relief operations
- To facilitate rescue and relief operations at international levels, Nepal has ratified the conventions
  - Privileges and Immunities of the United Nations ,Privileges and Immunities to Specialized Agencies

#### **Legal Framework**

i) In 1982 the Natural Disaster Relief Act came into existence, which was amended thrice enunciating the significance of the pre-disaster and post disaster activities. It is the legal instrument for handling disaster in the country. A new DRR act has been

drafted and in pipeline for the approval which covers all aspects of sustainable Disaster Risk Reduction, linking disaster with development and climate risk management.

ii) Soil and water conservation act 1982.

ii) Local Self Governance Act, 1999 (has given authorities and responsibility to the local authorities (district development committees, municipalities, and village development committees)

iii) Building Code, 1994 and Nepal building act 2064 (amendment) - (made compulsory in municipal areas)

iv) Environmental protection act 1996 (for environmental disaster, climate change)

iv) And other sectoral Acts, Rules and Regulations.

## **B) Policies**

For the first time in Nepal's history, Government of Nepal has included Disaster Management Programs in the 10th National Development Plan (2002-2007) consists of two separate chapters on disaster management. Chapter 17 emphasizes on the irrigation and water induced disaster preparedness, where as chapter 22 deals on population, environment and natural disaster management. Both the chapters reiterate on policy formulation, strengthening institutional mechanism, risk assessment, information collection and dissemination etc .Both the chapters also emphasized on the low costs disaster resilience construction practices, similarly, the three year interim plan (2007/08-2009/10) also has given 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, etc. and it is hoped that this attempt would be a landmark in the history of Disaster Management.

**1) The 10th plan** had set its objective as "to contribute substantially to make the public life secure by managing the natural and manmade disaster systematically and effectively and by making the development and construction related programs in the country sustainable, reliable and highly gainful." To achieve the objective the following strategies have been adopted:

While formulating plans and policies on natural and manmade disaster management, emphasis will be give into the use and development of technologies that lessen harm on natural disaster and environment.

- The relief and rescue activities that are provided to the disaster affected families by the state will be made transparent. Emphasis will be give to enhance awareness regarding natural disaster management.
- The seismological measurement center and the natural disaster management center established in the country will be strengthened.

To support the strategies mentioned above, the following policy and programs will be operationalised during the plan period:

Use of technologies to minimize the risk of natural disaster and environmental impact in the formulation of plans and policies.

- Reliable measures will be taken in rescue and relief activities.
- Strengthening of seismological measurement center and natural disaster management.

**2) 3 Years Interim Plan, 2007-2010** has following vision, objectives, strategies and programs set out for Disaster Risk Management:

#### **Long Term Vision**

The vision is to minimize social and economic loss and damage caused by disasters.

#### **Objective**

The main objective is to promote the security of life and property from the hit of natural disasters through sustainable, environment-friendly and result oriented development by making disaster management practices efficient, competent, strengthened and effective.

#### **Strategies**

The following strategies will be adopted for the management of disasters:

- Emphasis will be given to develop and apply environment-friendly systems in development and construction works.
- For the mitigation of risks of natural disaster, appropriate information flow and pre- disaster preparedness will be made.
- To strengthen collaborative works between the government, non government and private sector for rapid response and recovery to those affected by disaster.

### **Policy and Working Policies**

- Provisions relating to EIA and natural disaster assessment will be strengthened prior to the implementation of infrastructure construction.
- Timely reforms will be made on policy and institutional mechanisms in relation to the mitigation of risk of natural disasters.
- Appropriate mechanisms will be developed to strengthen the collaborative works among the government, non-government and private sector in order to deliver the quality service on response and recovery measures to the people affected by disasters.
- Awareness programs will be run to enhance the participation of the community organizations and the general public in order to mitigate and reduce the risks of natural disasters.
- Emphasis will be given to pre-disaster preparedness by advancing the process of identifying areas with high risk from disasters and their mapping works.
- To strengthen the Ministry of Home as a competent central coordinator for the disaster management by enhancing the capacity of agencies and human resources associated with disaster management.
- Technology for making weather and climatic forecasts robust will be used.
- Soil erosion, landslides, flood and river control works will be implemented in an effective way.

### **Programs**

- National strategy formulation and implementation
- Awareness programs
- Disaster competence enhancement program
- Rescue, relief and rehabilitation preparedness programs for the disaster affected area
- Study and research program
- Risk Hazard zone mapping and scooping
- Storage of relief and rescue materials
- Enhancement of the involvement of local bodies and communities in the prevention works on landslide, river control and soil erosion.

**Other policies:-**

**3) Nepal National Building Code, 1994,**

**4) National Action Plan, 1996 (with Amended)**



- 5) National strategy for disaster risk Management-2009 (NSDRM) (approved October, 11, 2009)
- 6) Hyogo Framework 2005-2015
- 7) Relief Standard -2008
- 8) National agriculture policy 2004.
- 9) National shelter policy 1996.
- 10 National urban policies 2006.
- 11) Nepal living standard survey (identify the economically vulnerable segment of the society)
- 12) National water plan, 2005 and Water resource policy, 1993
- 13) Water induced disaster management policy -2005
- 14) DWIDP's working procedure-2007 15) Other Sect- oral Plan and Policies

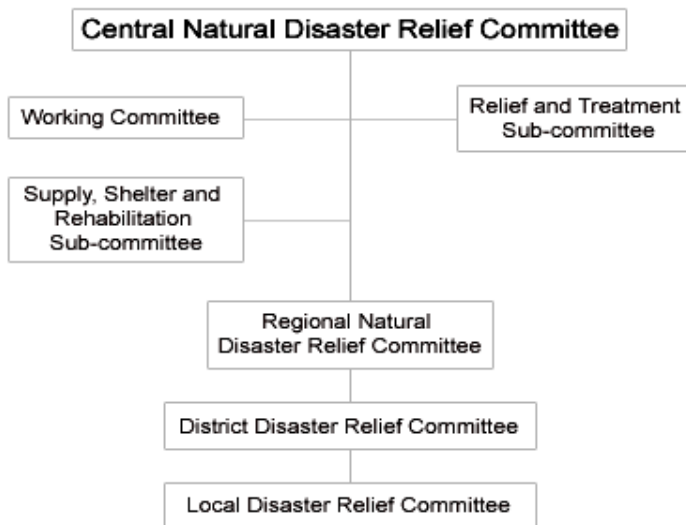
**c) Institutional Framework and Administrative system**

As the national focal point, Ministry of Home Affairs is accountable to prepare national policies and ensuring its implementation. MOHA is also responsible for rescue and relief works, data collection, dissemination as well as and distribution of funds and resources to the affected population through the structured process.

There is structural network throughout the country set up under the provision of Natural Calamity Relief Act, 1982.

**Disaster Response Framework in Nepal**

**Structure**



### Ministry of Home Affairs as National Focal Point on Disaster Management:

- Central Natural Disaster Relief Committee under the Chairpersonship of Home Minister and comprising of related ministries and security agencies along with voluntary organization like Red Cross.
- To support the functioning of Central Committee, there are Working Committee, Relief and Treatment Sub-committee and Supply, Shelter and Rehabilitation Sub-committee
- Regional Natural Disaster Relief committee under the Chairpersonship of Regional Administrator and comprising of related government agencies and security agencies along with voluntary organization like Red Cross.
- District Natural Disaster Relief Committee
- Local Natural Disaster Relief Committee

### **Role of MOHA:**

- Ministry of Home Affairs, which is also National Focal Point of Disaster Management in Nepal, has been taking initiation to address the issues of disasters and mitigate the adverse effect from it. We value very much interaction within country and sharing of experience with international organization working in this field.
- As a national focal point, Ministry of Home Affairs trying to develop appropriate policy related to the management of disasters.
- MOHA is doing various activities such as, the raising of awareness among the peoples, transfer of technology through training, networking with relevant national and international organizations and enhancing the capability of Government of Nepal to mitigate the impact of disaster.
- Rescue deals with the situation when the disaster occurs and the MOHA has started responding to the situation. It is in fact testing the preparedness of the community. Additional responsibilities are listed which come under roles of MOHA during disaster are as follows:
  - Coordinate and command to carry out rescue operation in such a way that nobody is left unattended with priority being given to disabled, old persons, women and children.
  - Monitor health conditions of the people in the community with the first priority.
  - Gives direction to the concerned authorities to the availing of portable drinking water and maintaining good sanitation condition and monitoring incidence of epidemics.
  - Distribution of relief materials to the people as required.
  - Coordinate rescue relief and operation being assisted by external institutions.
  - Directs security institutions in maintaining law and order situation in the area.

**(i) Central Disaster Relief Committee****Members of CDRC (Central Disaster Relief Committee)**

Hon'ble Home Minister	Chairman
Hon'ble Physical Planning and Construction Minister	Member
Hon'ble Health and Population Minister	Member
Secretary, Ministry of Finance	Member
Secretary, Ministry of Defense	Member
Secretary, Ministry of Home Affairs	Member
Secretary, Ministry of External Affairs	Member
Secretary, Ministry of Labor and Transport Management	Member
Secretary, Ministry of Water Resources	Member
Secretary, Ministry of Information and Communication	Member
Secretary, Ministry of Forest and Soil-Conservation	Member
Secretary, Ministry of Women, Children and Social Welfare	Member
Secretary, Ministry of Industry, Commerce and Supplies	Member
Secretary, Secretariat of national Planning Commission	Member
Brigadier, Nepal Army	Member
Inspector General of Police, Police Headquarters	Member
Representative, Social Service National Coordination Council	Member
Representative, Nepal Red Cross Society	Member
Representative, Nepal Scout	Member
Director General, Department of Mining and Geology	Member
Director General, Department of Metrology	Member
Two reputed persons nominated by Nepal Government	Member
Joint Secretary (Planning and Special Service Division), Home Ministry	Member Secretary

30 members (24 permanent and 6 invited members) central Natural Disaster Relief Committee, represented by various disaster related ministries, has been constituted under the chairmanship of Home Minister. This committee can invite at its meetings the concerned Member of Parliament representing the district affected by natural disaster.

## Functions of CDRC

The main functions and duties of the Central Disaster Relief Committee(CDRC) are to:

- a. Formulate the national policies regarding the relief works including the rehabilitation of the victims of natural disaster and the reconstruction in the areas affected by natural disasters and the advance preparation thereof and to prepare the programmed in accordance with the said policy and submit it to Nepal Government.
- b. Implement of direct to implement the policies and programs formulated pursuant to the clause above after it has been approved by Nepal Government.
- c. Keep the money, food stuff, clothes, medicines, construction materials and other goods received within the country Nepal and from outside as aid or donation under Central Disaster Relief Aid fund and to send such goods as required for relief work in disaster areas;
- d. Associate the social organizations in natural disaster relief works and coordinate the activities of those organizations;
- e. Form teams and send them to disaster area to assist in natural disaster relief works;
- f. Give directions to the district committee and local committee on the matters relating to relief works;
- g. Perform the works specified by Nepal Government for the execution of natural disaster relief works;
- h. Submit report on work progress to Nepal Government from time to time.

### **(ii) Regional Disaster Relief Committee:**

#### **Members of RDRC (Regional Disaster Relief Committee)**

Regional Administrator	Chairman
Regional Head, Nepal Army	Member
Regional Head, Nepal Armed Police	Member
Regional Chief, Health Directorate	Member
Regional Chief, Roads Directorate	Member
Regional Chief, Irrigation Directorate	Member
Divisional Chief, Water Supply and Sanitation	Member
Regional Chief, Forest Directorate	Member
Two reputed Social Workers (nominated by chairman)	Member
Regional Chief, National Planning Commission	Member

Regional Representative, Nepal Red-cross Society	Member
Regional Representative, Nepal Scout	Member
Deputy Regional Administrator	Member Secretary

The main functions and duties of the Regional Natural Disaster Relief Committee are:

Provide necessary suggestions to the CDRC.

- A) Formulate regional and district level plans on natural disaster.
- B) Coordinate district disaster relief committees regarding disaster.
- C) Provide disaster related information to CDRC.
- D) Implement directions of the CDRC.

**(iii) District Disaster Relief Committee:**

**Members of DDRC (District Disaster Relief Committee)**

Chief District Officer	Chairman
District Level Representative of the National Level Political Parties	Member
Chief of Nepal Army Unit	Member
Chief of the District Police Office	Member
In Charge, Public Health Office/Hospital	Member
Representative, Nepal Red Cross Society	Member
Engineer, District Housing and Town Development Office	Member
Chief, District Irrigation Office	Member
Chief, District Agriculture Development Bank	Member
Reputed Social Worker	Member
Local Development Officer	Member Secretary

12-15 members Districts Disaster Relief Committee represented by line agencies has been constituted under the chairmanship of Chief District Officer.

The Main functions and duties of the District Disaster Relief Committee are:

- A) To coordinate or direct to coordinate among local committees regarding the natural disaster relief works.
- B) To formulate district level plan on natural disaster relief works and submit such plans to the regional committee.
- C) To monitor the natural disaster relief work conducted by the Local Committee and supports the ongoing works.
- D) To provide information to Regional Committee related to natural disaster relief works from time to time.
- E) To work in accordance with the directives of the Central and Regional Committee.

**(iv) Local Disaster Relief Committee:** Formulate as per requirement and will responsible for response and recovery.

Even though the establishment of Disaster Relief Committees at the central, regional, district and local level is possible, the committees at the central level (CDRC) and district level (DDRC) are functional and the local level (LDRC) have yet to operate on a regular basis. Efforts are underway to operationalise the regional (RDRC), which is chaired by the Regional Administrator.

As per the Act the other partners in this process are various Ministries, National Planning Commission and Non Government Organizations are also included in the present setup. Department of Water Induced Disaster (DWIDP) has been established to give special focus on water induced disaster and mitigate the adverse effect from it under the Ministry of Water Resources, likewise Department of Mines and Geology for seismological hazards.

Nepal is taking actively participants on the activities of UNISDR, ADRC, ADPC, SDMC, and other national and international agencies for Disaster Risk Reduction.

### ***5) Budget size on national level in Nepal***

In Nepal the resources for disaster risk reduction are not allocated on priority basis. For the last several decades, government of Nepal has been allocating small amount of resources annually primarily for relief and rescue activities. There is no any predictable amount of budget allocated for DRR in the country but mobilizing according to the

contingency need and necessary basis. However several governmental departments such as water induced disaster prevention, soil conservation and water shed mgmt etc have been implementing activities related to disaster management.

In the fiscal year 2009-2010, the national budget for disaster mgmt was approximately Rs 4billion 440million. This is small amount of total budget of the total general account budget expenditure. The budget was allocated to the fields of I) relief and development rehabilitation for flood affected areas:-

(koshi,mid,and( kailali)far western region)	Rs: 1billion 300 million.
ii) Disaster prevention rescue and relief	Rs: 50 million.
iii) National land conservation and management	Rs: 1 billion 490 million.
iv) Soil conservation and watershed management	Rs: 200 million
v) Water induced disaster management:-	
(River training work, construct embankment)	RS 1billion 400 million
Total: -	Rs 4billion 440million

## **6) National Progress of the implementation of Hyogo framework for Action in Nepal :**

Nepal is a most vulnerable and disaster prone country in the world. Disaster management aims to reduce, or avoid the potential losses from hazards, assure prompt and appropriate assistance to victims of disaster, and achieve rapid and effective recovery. The Disaster management cycle illustrates the ongoing process by which governments, businesses, and civil society plan for and reduce the impact of disasters, react during and immediately following a disaster, and take steps to recover after a disaster has occurred. Appropriate actions at all points in the cycle lead to greater preparedness, better warnings, reduced vulnerability or the prevention of disasters during the next iteration of the cycle. The complete disaster management cycle includes the shaping of public policies and plans that either modify the causes of disasters or mitigate their effects on people, property, and infrastructure.

The mitigation and preparedness phases occur as disaster management improvements are made in anticipation of a disaster event. Developmental considerations play a key role in contributing to the mitigation and preparation of a community to effectively confront a disaster. As a disaster occurs, disaster management actors, in particular humanitarian organizations become involved in the immediate response and long-term recovery phases. The four disaster management phases illustrated here do not always, or even generally, occur in isolation or in this precise order. Often phases of the cycle overlap and the length of each phase greatly depends on the severity of the disaster.

- Mitigation - Minimizing the effects of disaster.  
Examples: building codes and zoning; vulnerability analyses; public education.
- Preparedness - Planning how to respond.  
Examples: preparedness plans; emergency exercises/training; warning systems.
- Response - Efforts to minimize the hazards created by a disaster.  
Examples: search and rescue; emergency relief.
- Recovery - Returning the community to normal.  
Examples: temporary housing; grants; medical care.

But every year thousands of people are losing their lives due o the natural disaster. So Nepal has legally started to tackle disaster by the natural calamity act 1982. In the act is giving the priority of rescue and relief activities but now the new disaster concept has started to preparedness, prevention, mitigation, response, recovery, rehabilitation, is In viewing weak infrastructure development, socio-economic condition of Nepal there is a need to focus more on less expensive and sustainable Structural and non-structural counter measures, that can also help raise the overall awareness level of local



communities towards disasters risk reduction. For the disaster risk reduction Nepal has committed the Hyogo framework for action 2005-2015 and the following activities are started to achieve the goals of HFA. In October 11 2009 government of Nepal has approved the national strategy for disaster risk management (2009) which includes the clear cut roles and responsibility of disaster management cycle and establishment of new autonomous body on national disaster management authority headed by prime minister.

***Among others the recent prioritized efforts for the implementation of the HFA in Nepal are as follows:***

### **Strategic goals 1**

*A) 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.*

First time in Nepal's history, the Tenth National Development Plan (2002-2007) consists of two separate chapters on disaster management. Chapter 17 emphasizes on the irrigation and water induced disaster preparedness, where as chapter 22 deals on population, environment and natural disaster management. Both chapters reiterate on policy formulation, strengthening institutional mechanism, risk assessment, information collection and dissemination, etc. Both the chapters also emphasized on the low costs disaster resilience construction practices. Similarly, the Three Year Interim Plan (2007/08-2009/10) also has a 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, etc.

*B) 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.*

Ministry of Home Affairs is leading agency for disaster management activities with other eight key sectoral ministries namely; Agriculture; Education; Environment, Science and Technology; Health; Local Development; Physical Planning and Works; Water Resources; and Forest and Soil Conservation have set-up a separate unit within the ministry to look after DRR issue. Moreover, an institutional mechanism for the post disaster related and coordination activities at regional, district and local levels are already in place. Several I/NGOs have been implementing DRR activities at community level through community based disaster risk management (CBDRM) approach.

Likewise, CBDRM has been used not only for the DRR activities rather entire development initiatives at the community level.

*C) 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.*

Several Municipalities in disaster prone areas have endorsed the Building Code. Likewise, technical staffs of the Municipalities and key Government ministries have received trainings on Building Code Implementation.

**Priority for action 1:- *Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.***

*A) National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels.*

Government of Nepal enacted the Natural Disaster Relief Act in 1982, which was revised twice. Despite of the revisions, it focuses on post disaster related activities. Soil and Water Conservation Act, 1982, Building Act and other concerned Acts have provisions of some component of DRR. But these legal frameworks are not comprehensive. Still, the role and responsibilities are not substantially operationalized among agencies and has not fully mainstreamed the pre-disaster activities and DRR in the Acts. However, Ministry of Home Affairs has prepared the National Strategy for Disaster Risk Management (NSDRM) with the help of stakeholders consultations which is approved by the government of Nepal on October 11, 2009. In NSDRM has clearly defined the roles and responsibilities at national(central) to local levels, it is designated new organization structure National Commission for Disaster risk Management (NCDRM) chaired by prime minister which is institutional mechanism to address the DRR from national to local(community) levels, it is also emphasize establishing the New autonomous body National Authority for Disaster risk Management (NADRM) from central, regional, district, municipal, local levels with adequate resources, capacity strengthening at systematic, individuals, organizational levels, and decentralized budget system which is the great achievement on progress of implementation of Hyogo framework for action in Nepal and new DRR Act has been drafted and in pipeline for the approval, which covers all aspects of sustainable DRR, linking disaster with development and climate risk management.

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

Resources for DRR are not allocated on priority basis. For However, several Government Departments such as, Water Induced Disaster Prevention, Soil

Conservation and Watershed Management, etc. have been implementing activities related to disaster management. Despite of some activities being implemented both by Government and non-government agencies, a dedicated and predictable budget allocation is not a regular practice in Nepal.

*C) Community Participation and decentralization is ensured through the delegation of authority and resources to local levels*

The Local Self-Governance Act (1999) has given the authority and responsibility to the local government authorities (District Development Committees, Municipalities and Village Development Committees) to design and implement DRR activities at local level. However, there is no any systematic and assured mechanism of resource allocation and distribution to the local authorities from the central government.

*D) A national multi sect oral platform for disaster risk reduction is functioning.*

The Ministry of Home Affairs has already initiated process to establish a multi-sect oral national platform with representative from concerned government agencies, UN agencies, donors, INGOs, NGOs, media, academic institutions, private sector, and CBOs.

Bringing together to all above mentioned agencies in one platform is not an easy task. However, for effective and efficient disaster management and risk reduction in the country such cooperation and collaboration of all actors are imperative. Despite of the usefulness of working together in the field of sustainable disaster management/ risk reduction, it seem no concrete initiatives from different sector to form such national level platform comprising members from all walks of life to support government to successfully implement the HFA.

MOHA in close collaboration with the National Planning Commission will take leadership role to establish such national platform at the earliest possible and also initiate process to convince the political bodies and individuals.

***Priority for action 2:- Identify, assess and monitor disaster risks and enhance early warning:-***

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

Few agencies (both government and non-government) have initiated local level hazard mapping in few communities. However, such information is scattered and scanty. There is no national level multi-hazard risk assessment covering regularly occurring disasters such as floods, landslides, etc. However, a historical record of disaster occurrence called "Desinventar" for last 35 years at national level is available and regularly updated.

Unfortunately, no proper use of such information on planning and decision making process as of now. Some NGO/INGO are undertaking research projects to better understand local adaptation strategies to natural hazard risks. International organization such as International Centre for Integrated Mountain Development (ICIMOD) has initiated process to assess the socio-economic impacts of GLOFs and flash floods through case studies. Similarly, ICIMOD and UNDP together with relevant government agencies have been involved in GLOF hazards assessment and monitoring in specific areas.

No initiative by both government and non-government sectors to undertake a national level multi-hazard risk assessment covering major and annually recurring natural disasters such as flood, landslides, drought, fire, epidemics, earthquake, etc. Also most of the available information on disaster occurrences has not been used for any planning and decision making purpose.

Concerned Government Ministry in close cooperation/ collaboration with non-government agencies should initiate a national level risk assessment exercise covering major hazards in the country. This single exercise will enable all agencies working in the field of DRR to identify the most vulnerable communities, major hazards, disaster prone districts/ VDCs/ communities. This information can also be used for any development planning initiatives in the country.

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

Few agencies at the central and district levels regularly publish and disseminate disaster related information. However, transparent and effective systems to monitor and archive of disaster related data are still to be institutionalized. Similarly, as of now the focus to collect information at any level is only limited to any disaster occurrence or post disaster situation.

Disaster related information collected and disseminated by different agencies doesn't tally each other. The data collection formats are different for different agencies, the collection level is different, disaggregated information are not available at all levels. Manipulation of information is also a challenge, etc.

In normal time, disaster related agencies can work together to develop information collection formats, software, pre-test, etc. Government has developed a Disaster Management Information System (DMIS) in early 2000s, before Desinventar and was in practice in six districts. This DMIS software can be updated and circulated widely for use at all levels.

*C) Early warning systems is in place for all major hazards, with outreach to communities.*

Few localized single hazard oriented early warning systems are in few places for last 2 decades (Tsho Rolpa GLOF, Chit wan Flood, koshi flood, kailali flood landslides in Kabilas village chit wan etc.). However, there is no early warning system in place for major hazards Without reach to disaster prone communities (end to end EWS). Technical know-how, financial resources, trained human resources, and collaboration between government agencies and communities, are the major challenges to establish a fully functional and effective multi-hazard early warning system both at central and community levels. Identification of major hazards and institution to deal with such hazard, capacity of such identified agency for an effective and efficient early warning, networking with similar organization both within and outside country, appropriate policy and institutional mechanism will help to establish efficient and effective end to end early warning system. Government should initiate/improve public-private partnership for EWS (especially in case of GLOF, flash floods, landslides, earthquakes etc.) and people centered EWS.

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

National and local levels risk assessment is still a new phenomenon in the country. The need for regional cooperation and especially real time data sharing has been recognized by most stakeholders in different forums. Some initiatives have been taken place such as dialogue with India regarding inundation, regional flood information system initiative, etc. With the support from UNISDR, government of Nepal is undertaking the disaster-poverty interface study.

**Priority for action 3:- Use knowledge, innovation and education to build a culture of safety and resilience at all levels**

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

Relevant and update information on disasters in the country are scattered and scanty. As of now, through the support of UNDP, historical information on disaster occurrences called "desinventar" has been collecting disaster related information for last 36 years (1971-2007) and updated regularly. Similarly, the Department of Water Induced Disaster Prevention, Nepal Red Cross Society and few other/NGOs have been collecting and disseminating the national level information on disasters annually or occasionally. However, as of now there is no any designated and fully functional central and district level data clearance house. Similarly, there is no any established mechanism to share such available information. Likewise, in many instances, the available information is not utilized for new programs /activities design and implementation. Recently, AusAID has funded UNDP to support Government of Nepal

to establish National Emergency Operations Center for collecting, collating, analyzing and disseminating information regularly on disasters and coordination.

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

The current school curricula has limited amount of information on disaster management, however they are scattered and does not match the need of the country. In 2008, the secondary level of education curricula has recently incorporated disaster management component with the support of WWF and other institutions. In addition, so many extra curricula activities related to DRR have been incorporated in the existing secondary level curricula. The Ministry of Education (MOE) is reviewing the existing school curricula from grade 6 to 8 and willing to include DRR as a separate chapter. MOE is planning to integrate the DRR component into the teacher training curricula as well. Since the recent past, several I/NGOs have been supporting the MOE to incorporate DRR in to School curricula, teacher training on DRR, awareness building classes, publication of various IEC materials on DRR and distribution to schools. Similarly, the Administrative Staff College of the Government has incorporated DRR in most of their training program for government officials

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

Science based disaster risk reduction/ management is a new phenomenon in Nepal. In the recent past, very few government and academic institutions have initiated empirical research on cost benefit analysis and mitigation practices in Nepal. However, with the support from UNISDR, Nepal is undertaking a national levels study on the relationship between poverty and disaster and Nepal is practicing some internationally accepted and practices tools for retrofitting of buildings and vulnerability assessment.

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

Nepal has been commemorating the IDNDR/UNISDR Day since the beginning of the IDNDR and the Earthquake Safety Day for lasts several years. Some efforts have been carried out through schoolchildren by the use of IEC materials, quiz context, debate and discussions at the community level. Similarly, several agencies have been posting/ erecting hording boards on DRR in different locations, organizing folk songs competitions and street dramas; public announcements through radio and TV, hospital preparedness drills etc .Likewise, few academic institutions have been involved in pursuing researches on fire resistant thatch materials, etc. However, these awareness raising activities are inadequate to reach to the real mass or the potentially disaster prone communities of the country.

#### **Priority for action 4:- Reduce the underlying risk factors**

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

The existing natural resources management Acts and Acts related to climate change does not include disaster management as an integral part of it. However, the National Disaster Management Plan developed in 1993 and endorsed by the Government in 1996 emphasized that the need to bring the natural resources management, climate change and development together with disaster management. It is anticipated that National Strategy for Disaster Risk Management has given synergy to integrate natural resources management (NRM) and climate change along with sustainable disaster management.

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

Ministry of Health with the technical and financial support from different agencies has initiated the non-structural vulnerability assessment of hospitals in Nepal and also provided the recommendations to reduce the disaster risk. However, this initiative has covered only few hospitals. Similarly, there is no other national level initiative to reduce the vulnerability of population most at risk such as insurance policy, food security, etc. Government and few non-government agencies have been distributing subsidized food in food insecure areas. Similarly, risk assessment of major public buildings though building code has been implemented in selected municipalities as per the Nepal Building Act 2007(amendment). At community level in some disaster prone areas, people have been practicing indigenous resiliency practices.

The major challenges to overcome this particular indicator is also due to lack of proper institution with the mandate, appropriate policy, lack of technology such as Department of Hydrology and Meteorology can issue weather forecast only for a day and inadequate trained human resources.

*C) Economic and productive sectoral policies and plans have been implemented to reduce the vulnerability of economic activities*

Despite of the fact that the 10th National Development Plan and the Three Years Interim Development Plan focuses on disaster risk reduction and integrating disaster with development, NO significant activities have been designed and implemented to achieve those objectives mentioned in the National Development Plans. Sectoral policies such as National Agriculture Policy 2004, National Shelter Policy 1996 (2053 BS), National Urban Policy 2006, etc. has incorporated the disaster issues. However,

the implementations of these Acts are weak. The challenge include; no any systematic studies and or information to identify the most vulnerable economic activities and productive sectors in the country. Nepal Living Standard Survey 1996 and 2003/4 has identified economically vulnerable segments of the society. However, no linkages between economical vulnerability and disaster. Design and pursue empirical studies on the vulnerable economic activities, detail analysis. Involve public and private sectors in designing and carrying out such studies/ researches.

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

Land-use planning is a significant commitment by each and every periodic development plans. Unfortunately, the implementation and monitoring is weak due to several reasons. Building Code is made compulsory in municipal areas. New public buildings have been constructed according to the norms but needs rigorous monitoring mechanism. National Shelter Policy 1996 and National Urban Policy 2007 have incorporated to some extent the issue of DRR. Human settlement program is not substantially designed and implemented from a building back better. Perspective only policy is formulated and not effectively implemented.

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

Fortunately for the last several years, Nepal did not face any major natural disaster that requires substantial post disaster related activities. However, the existing policy and practices doesn't include the "Build Back Better" concept in the post disaster activities.

The existing Disaster Management Act (1982) has overlooked the planning and management of human settlements incorporated DRR elements. The proposed revision of the DM Act is taking more time than expected for its endorsement. Either revision of the existing DM Act with clear provision of DRR element in the planning and management of human settlements and enforcement of the Building Code or enactment of new DM Act embedding the DRR issue in the human settlement component and Building Code. Capacity building at all levels.

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

Government is aware of the need to incorporate and institutionalize disaster impact assessment (DIA) in major projects during its design phase such as EIA. However, it needs substantial revision of the existing DM Act or enforcement of new Act. Make DIA compulsory in all development projects and programs.



**Priority for action 5:- *Strengthen disaster preparedness for effective response at all levels***

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

The current DM Act (1982) focuses on the post disaster activities. However, since the second World Conference on Disaster Reduction, Government of Nepal has initiated processes to reformulate its DRM/R policy and institutional mechanism through a very consultative/ participatory processes. The new DRM Act and the Strategy encompasses all elements of disaster management cycle, long term and sustainable disaster risk reduction/ management and linking disaster with development. The proposed Act and strategy also strongly emphasized the establishment of a national framework for disaster risk management which includes establishment of autonomous DRM authorities from the central level (NADRM as an apex body) through all levels. Institutional commitment is required for the effective implementation of the plans and policy. It is also necessary to ensure compatibility between Act and the strategy for DRM.

Nepal went through a violent social transformation process over the last 13 years. Therefore, the entire government machinery was engaged in peace process. This peace process sidelined the disaster related initiatives in the country. Similarly, the unavailability of predictable amount of government resources for program design and implementation also jeopardized the formulation of policy, establishment of an appropriate institution and capacity building activities. Despite such conditions Nepal has implemented several good practices, methodology and templates which technically, socially and economically feasible. The real challenge is to upscale these practices through massive capacity building and creation of working conducive legal and policy environment at all levels. Lack of implementation mechanism is a challenge from the VDC level to the central level in every sector. Focusing to policy and decision makers. Appropriate regulations commensurate with the act and strategy should be developed and integrated in the governance process at all levels from village to the national, to ensure incorporation of DRR into all development planning and implementation. This entails that all infrastructures are made disaster resilient all critical facilities are functional even after the disaster. Appropriate guidelines and "How to use such Guidelines" should be developed and use for training.

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

Few districts of Nepal have developed District Disaster Management Plan based on GIS information during early 2000s. However, due to lack of coordination, technical capability, etc. these plans were not fully implemented and monitored. Similarly, Nepal developed the National DM Plan in 1993, which was presented during the First World Conference on Disaster Reduction (1994) and endorsed by Government in 1996. However, due to several reasons and laps, the activities were not successfully implement and monitored. Since then, several agencies both government and non-government are working in the field of DRM/R in a much more uncoordinated manner and without developing any plan at all levels. Preparedness planning is still to be incorporated at VDC, Municipality and even district levels. Few prepositioning of relief materials have been experimented mainly in Kathmandu valley and this need to be expanded to other prone and densely populated areas. NRCS has warehouses to store food and non food items at strategic locations for emergency use. This network of stocks should be expanded at least to all districts and possibly to the VDC level. This should accompanied by appropriate capacity building for inventory, periodically replenishment of supplies, and operation of preposition of the materials. Government should provide enabling environment for youth to work as volunteers in disaster preparedness and response. The major challenges includes the poor realization of a need of planned disaster risk reduction/management and linking disaster with development; inadequate capacity at all levels; motivation of staff engaged, implementation, allocation of fund for program design and implementation etc.

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

The Government has two sources of funding for response and recovery activities; The Prime Minister's Disaster Relief Fund and the Ministry of Home Affairs regular disaster relief fund. The resources for the first one come from individual and institutional donation/ contribution within and outside the country and the second one from government regular budget. Government should encourage donors and I/NGOs to allocate at least 10% of their total annual budget for DRR activities. Similarly funds for DRR activities should be available together with relief funds at all levels from VDC to central. Likewise, government should encourage corporate sector to be engaged in disaster preparedness activities. Basic training on life saving; search and rescue; and relief collection and distribution should be designed and imparted at community level. Recommendations: Information/ experiences based allocation of resources, making a local mechanism of relief and rescue activities more target-oriented with the support from local authorities.

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

On an ad hoc basis several organizations organize lessons learnt sessions after the occurrence of any disasters in the country. There is no any concrete and well established forum for sharing such knowledge and experiences. However, since 1996 a forum called Disaster Preparedness Network (DP Net) Nepal has been established by government, UN, donors, I/NGOs which is serving as a platform to share information, experiences, knowledge, capacity building and advocacy at central level. Sit Reps are now systematically produced by OCHA and NRCS however the distribution of the information doesn't reach at all actors and even reached, it is not used for future planning and relief/response. Challenges: Disaster management is a new phenomenon in the country and there were only few agencies involved till recent past. Likewise, lack government commitment in the field of DRR also hinders the formation of such national and district levels forums to share knowledge, information and resources. Disaster information management systems should be decentralized to the district level for analysis and use for planning purpose. First hand data on information on hazard and disaster impact should be collected from ward and village level. Necessary mechanism and capacity for this should be installed and update regularly. Recommendations: Government should initiate to form such national level platform to share information, knowledge, enhance coordination, avoid duplication and to finally to assist government to successfully implement the HFA.

### **Future outlook**

*A) 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 Three Year Interim Development Plan (2007/08-2009/10) reiterates the importance of sustainable disaster management to retain the development gains and sustainable human development in the country. The only missing parts are the enactment of the DRR/M Act/policy and institutional mechanism. It is anticipated that in very near future the Government will endorse the proposed DM Act, Strategy and will establish an appropriate institution to look after all aspects of DRR/M. The proposed Act, strategy and institution will entirely shift the disaster management paradigm from post disaster focused to DRR, concussive coordination and networking at all levels and outside the country, adequate resource mobilization from different sources within and outside country. in October 11, 2009 the government of Nepal approved the National Strategy for Disaster Risk management(NSDRM) when it active all the disaster management cycle covers by this strategy and nation will be well prepared to tackled the natural disaster. This will also encompasses the linkages between DRR - climate risk reduction –poverty reduction and natural resource management.

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

Challenges are categorized in three types: The major challenges the DRR programs are facing includes the political will, forwarding the proposed DM Act and the Strategy through the multiple channel of decision making to enact it and its successful implementation through all stakeholders & means! A more equipped institutional mechanism would be developed through devolution at local level, which eventually could cope with the challenge of the future.

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

*Overall challenges:-* Lack of integrated approach of DRR/M central as well as local levels, No national level risk assessment, haphazard/ adhoc basis DRR/M planning and implementation of activities.

**Future Outlook Statement:** Several studies (UNDP 2004, World Bank 2005, etc.) revealed that Nepal is one of the global "HOT-SPOTS" for natural disasters. Therefore, based on these studies and the annual sufferings from natural disasters, the Government has proposed drastic changes in the DRM policy, institutional mechanism and future activities with a view to create an enabling environment "Towards a Safer Nepal". Once the national platform will be established, it will provide opportunity to all agencies to share their DRR related programs/ projects to avoid duplication, unhealthy competitions and to maximally utilize limited resources.

**7) recent major projects on disaster risk reduction in Nepal on priority basis or cluster priorities for 2009 approach are as follows:-**

**(1) HEALTH**

Provide and preposition essential emergency medicines, equipment and health kits. Intensify the disease surveillance and reporting system. Strengthen the capacity of peripheral level health staff and vulnerable communities by providing training and capacity building to upgrade emergency preparedness and response and preposition key medical and reproductive health kits. Ensure health sector coordination between humanitarian and development partners during disaster response and recovery operation, including strengthening referral services

**(2) NUTRITION**

Implementation of preparedness activities for emergencies, including lessons learned from the floods. Implementing the CMAM pilot and resource mobilization for increased outreach and national coverage. Multi micro nutrient supplementation in food deficient areas.

**(3) FOOD SECURITY**

Volatility in global food prices is likely to remain for the foreseeable future, with an upward shift to higher (real) prices in the medium term. Coupled with some of the worst malnutrition rates in the world, vulnerability to natural disasters and the longer term effects of conflict, food insecurity is a critical issue to be addressed in Nepal. The priorities for food security are to address the high food price crisis through: quick-impact, food for assets activities that will meet immediate food needs and create assets to improve household food security in the medium to longer term; and, activities to intensify agriculture production, storage, and market linkages through an investment in agriculture and other inputs and technical support; household and community-based disaster preparedness to reduce the impact of possible future natural or man-made disasters. A limited amount of relief food assistance and recovery programs (agriculture, livestock, and livelihood support) for people displaced by the Koshi floods is also planned in 2009. The overall amount requested 2009 appeal under the food security is US\$46 million for 3.1 million beneficiaries (5,45,800 households).

**(4) WATER SANITATION AND HYGIENE**

To control the annual outbreaks of Acute Gastroenteritis (AGE), mainly occurring in the Hills and mountains, train local volunteers, promote the use of household water treatment methods and hand washing with soap and provide chlorination tablets in all VDCs identified by EDCD as vulnerable to AGE. As a DRR exercise, identify and train local NGOs and volunteers from districts and flood prone VDCs in the Terai on WASH disaster response, including the installation of emergency facilities (water supply, toilets, and bathing and solid waste management facilities), and public health/hygiene

promotion. Strengthen the capacity of the WASH Cluster for disaster response by organizing training for personnel of I/NGO and government partners.

#### (5) EDUCATION

Continuation of preparedness capacity building focusing at district levels and including a wider range of scenarios (bird flu, landslide, earthquake). Finding solutions for the structural challenges in emergencies, such as salary for temporary teachers and textbooks availability. Continuing strengthening cluster capacity

#### (6) PROTECTION

Strengthen the capacity of national actors to deliver protection in times of emergencies at the central, district and community levels, including GBV prevention, monitoring and reporting, and service delivery for survivors; Monitor and record human rights concerns (including violence, threats and intimidation, caste and gender discrimination as well as sexual and gender-based violence) in and around camps and resettlement areas – in coordination with key national human rights partners, including the National Human Rights Commission; Advocate for the approval IDP procedural Directives and assist Government authorities to implement Nepal's IDP Policy through the dissemination of the "Procedural Directives"; support training for government officials and civil society, at the village, district or regional levels, including specific training on the gender aspects of the Directives; Ensure protection of all IDPs in line with the national policy. Enhance response mechanism to provide essential services to children and youth in need of special protection including psychosocial services and other necessary assistance under the leadership of the Women Development Office; Develop modules for GBV response in emergencies based on lessons learnt from last year's flood response. Ensure systematic Mine Risk Education coverage in the twenty most affected districts.

#### (7) SHELTER

Proper set-up of the permanent shelter cluster to enable a comprehensive coordination with defined roles and responsibilities for the emergency and recovery phases (including mobilizing required resources). Increased awareness raising on the cluster coordination system, including roles and responsibilities, with the responsible Government partner, the DUDBC as well as implementing organizations. Support the draft of the shelter response strategy initiated by NSET with the support of UNDP, UNHABITAT, IFRC and (mobilizing resources for shelter projects)

#### (8) CAMP COORDINATION and CAMP MANAGEMENT (CCCM)

Monitor activities in current affected areas by existing emergency responses. Develop contingency plans for inevitable emergency responses in the future including but not limited to Flood Response, Earthquake Response, and other CCCM activation are as  
Continuation of expanded trainings and simulation exercises for Government actors and

local players. Refugee ID cards were distributed to all registered refugees from Bhutan (above 16years).

#### (9) DISASTER PREPAREDNESS

Support the Government in hosting the Asia-Pacific regional Search and Rescue (INSARAG) earthquake exercise. Updating and revision of IASC contingency plans and testing plans through simulation exercises. Supporting the implementation of national strategies for disaster risk management, including the design of a comprehensive national earthquake response plan involving Government, Clusters, and other response organizations at national and district level.

#### (10) COORDINATION

Full implementation of cluster approach and mapping cluster approach to government, Structures. Improved humanitarian coordination structures at district, sub-regional and national levels. A common approach to needs assessment and impact evaluation. Use of standard information management tools for data preparedness

#### **8) ADRC counterpart**

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