

## DISASTER MANAGEMENT SYSTEM IN NEPAL – POLICY ISSUES AND SOLUTIONS

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### Abstract

Nepal is highly vulnerable to natural and human induced disasters. Complex geology, variable climatic conditions, active tectonic processes, rapid urbanization, unplanned settlements, lack of public awareness, increasing population, weak economic condition and low literacy rate have made her vulnerable to disasters. Therefore, advanced technology and adequate resources are needed to alleviate the disasters in Nepal. Training and other educational programmes are extremely needed to raise awareness. Nepal needs proactive Disaster Management Act and Policy for disaster risk reduction activities.

**Key words:** Disasters; Awareness; Policy; Reduction; Training.

### 1. Background

Nepal is prone to various types of disasters like: floods, landslides, fire, epidemics, earthquakes, avalanche, windstorm, hailstorm, lightning, glacier lake outbursts (GLOFs), drought and so on due to the rugged and fragile geophysical structure, very high peaks, high angle of slopes, complex geology, variable climatic conditions, active tectonic processes, rapid urbanization, unplanned settlements, increasing population, weak economic condition and low literacy rate. Apart from the above reasons, the lack of coordination among disaster management stakeholders, dearth of resources, shortage of technical manpower, low level of public awareness, difficult geo-physical condition, absence of modern technology are other issues that have been found as the major obstacles to manage the disasters in Nepal (Chhetri 2001). More importantly, the absence of a proactive Disaster Management Act and Policy has been found as the main impediments for the disaster governance in Nepal.<sup>11</sup>

The Himalayan region of Nepal can be considered as one of the severest flood hazard zone of the world. Heavy precipitation, high wetness and steepness of watersheds and river channels contribute to flood magnitudes.<sup>4</sup> Mainly, the middle Hills are prone to landslides and the Tarai to flood and fire. Thus, flood, landslide and fire disasters

are recurrent disasters in Nepal. These disasters occur almost every year in one part of the country or the other causing heavy loss of lives and damage to physical properties.<sup>10</sup>

Many government reports indicate that over the last 30 years - floods, landslides, fires, avalanches and epidemics kill hundreds of people and destroy property worth millions of dollars. They also have a negative impact on the nation's development program. In addition to the above factors, the losses from disasters are increasing in the absence of proactive disaster management policies, laws and preparedness and risk reduction programs. Existing laws that deal with disasters do not address them in totality as the law is limited to immediate disaster response. As a result such focus as does occur is limited to disaster response and relief rather than complete approaches including planning, preparedness and recovery.<sup>11</sup>

The earthquake of 1934 A.D., 1980 A.D. 1988 A.D. the flood of July, 1993 A.D. and the flood of 2008 A.D. are the most devastating natural disasters in Nepal which not only caused heavy losses of human lives and physical properties but also adversely affected the development process of the country as a whole.<sup>1</sup> In this way, Nepal stands at the top most disaster prone countries of the world. In a nut cell it is a hot spot of disasters. Please see the Table 1 below for the losses of

Table 1: Occurrence and Effect of Disasters on Human Lives and Property Losses in Nepal 1971-2011

Year	No of Records	No of Deaths	Missing	Injury	Affected Population	Destroyed Houses	Damaged Houses
1971	115	311	2	55	860	131	142
1972	115	173	37	88	902	771	86
1973	207	214	9	317	7846	1957	160
1974	231	507	43	725	19917	2615	859
1975	145	263	38	133	37612	2051	36
1976	234	304	143	93	12002	4957	448
1977	204	162	54	195	6822	1347	462
1978	304	471	401	90	15172	3132	75
1979	204	640	0	114	62025	2061	68
1980	216	423	67	506	8614	14348	13650
1981	178	258	201	434	45513	1246	1004
1982	164	683	19	24	5159	1039	37
1983	171	492	15	122	4197	1384	1207
1984	368	1091	24	611	12418	2568	485
1985	172	229	7	77	5160	1475	63
1986	113	289	0	34	5163	1160	21
1987	121	122	0	68	13548	1041	6115
1988	337	1327	15	8205	3766	23202	41182
1989	303	352	5	1419	20087	4813	1377
1990	207	512	35	4107	7995	1209	1366
1991	415	1097	26	179	53441	1392	202
1992	410	998	63	29	23383	6225	79
1993	889	1812	82	304	653336	21249	21673
1994	427	1175	46	1253	183848	3175	517
1995	416	1158	35	1484	696515	9685	15898
1996	369	1147	98	1579	623216	19638	13923
1997	561	1331	4	944	217599	4549	1046
1998	429	1154	16	304	508900	15978	477
1999	481	1409	40	422	65159	4046	697
2000	664	708	46	342	29770	3038	1810
2001	1211	1902	80	3465	73652	6308	2350
2002	1170	899	105	12081	398748	14059	5479
2003	931	971	86	3438	565002	1974	761
2004	1020	1098	60	224	331929	1617	3339
2005	477	333	101	164	110647	1449	539
2006	524	596	101	5859	9265	1927	8512
2007	877	636	891	4694	86876	9456	1466
2008	1526	944	129	1266	483465	16029	3292
2009	1584	1944	140	1303	377792	3760	9124
2010	1555	839	146	473	143048	4263	8453

2011	1517	859	143	991	376073	7322	7878
<b>Total</b>	<b>21562</b>	<b>31833</b>	<b>3553</b>	<b>58215</b>	<b>6306442</b>	<b>229646</b>	<b>176358</b>

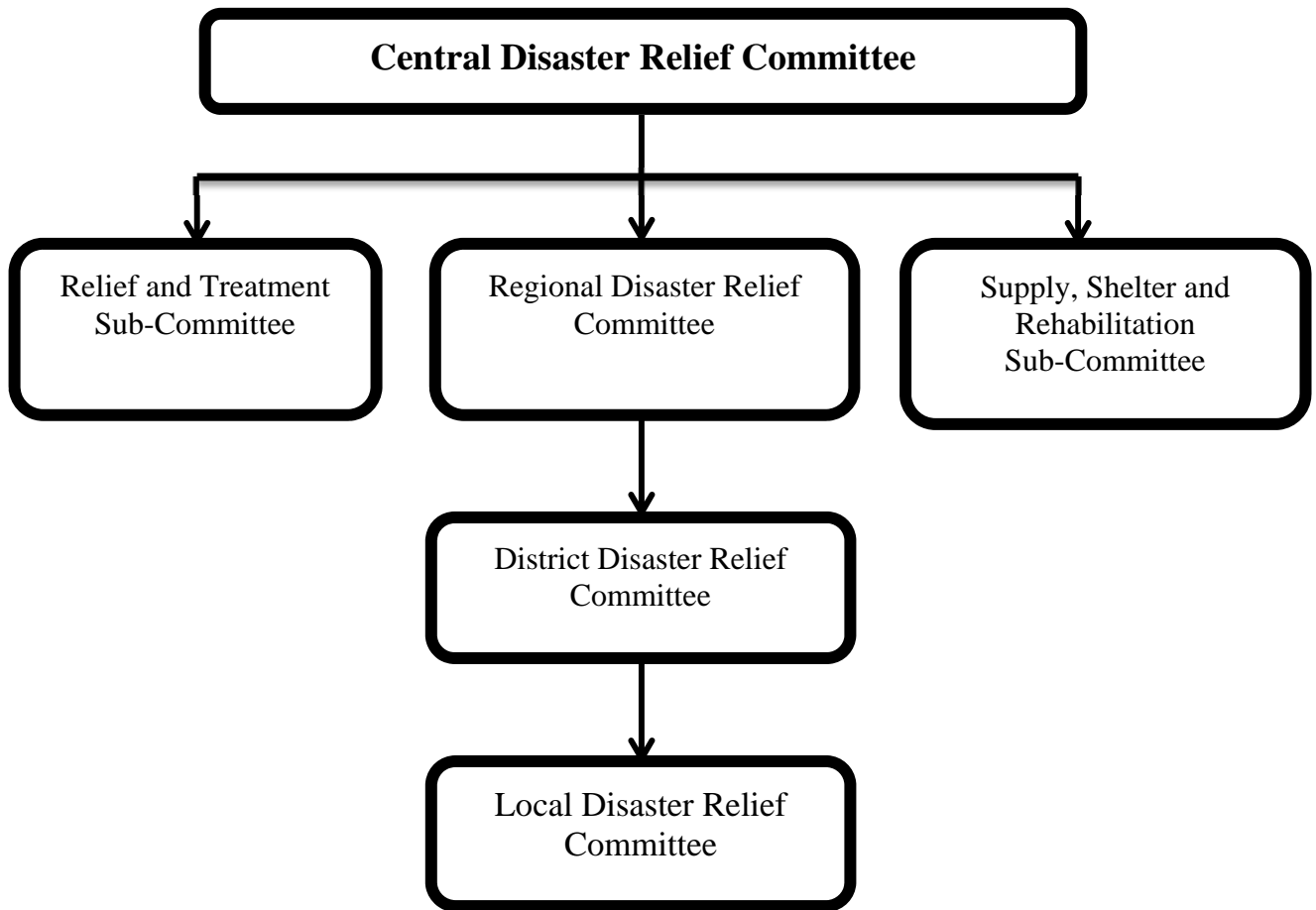
Source: DesInventar, 2012 ; URL: www.desinventar.net, www.nset.org.np; For more detail: NSET

**2. Structure of Disaster Management System in Nepal**

Natural Disaster Relief Act (NDRA), 1982 was enacted in 1982 A.D. Before the enactment of the

Act, disaster management activities were carried out in an unorganized way. Therefore, to perform the disaster management activities in an organized way, NDRA has constituted an organizational structure or system as shown below in figure 1:<sup>6</sup>

Figure 1



The above figure is adopted from the book of Dr. Meen Poudyal Chhetri.<sup>10</sup>

According to the NDR Act, 1982 Central Natural Disaster Relief Committee (CNDRC) has been constituted under the chairmanship of the Home Minister in order to formulate and implement the policies and programs relating to the natural disaster relief work and to undertake other necessary measures related thereof. Moreover, the Central Committee prepares specific norms of relief assistance to be given to the disaster victims of the affected area in cash and/or in kind through the District Natural Disaster Relief Committee (DNDRC).<sup>6</sup>

The Central Committee may constitute Relief and Treatment Sub-Committee (RTSC) and Supply, Shelter and Rehabilitation Sub-Committee (SSRSC) which provides necessary advice and suggestions to the Central Committee, helps to execute policies and directives of the Central Committee and operates effectively the rescue, relief and rehabilitation works during mega disasters.<sup>2</sup>

### 3. The Role of the Focal Agency

The Ministry of Home Affairs is the focal agency for disaster management in Nepal which is guided and directed by the Central Disaster Relief Committee headed by the Home Minister in the matters of disaster management. The Ministry formulates and implements national disaster policies, plans, programs and policies. Primarily, the Ministry and its partners are focused to carry out rescue operations and provide relief materials to the disaster affected population during disasters.

Being the nodal agency, the Ministry of Home Affairs has the responsibilities of release and distribution of funds and resources to the affected population and area through the Regional and District Administration Offices. The Ministry of Home Affairs has the responsibilities to coordinate the activities relating to disaster preparedness, mitigation, reconstruction and rehabilitation works with other disaster management related agencies. It has its network throughout the country in the form of the Regional Administration Office, District Administration Office and the District Police Office which are the field offices to carry out rescue and relief works during disasters.<sup>2</sup>

In the capacity of the focal agency, the Ministry carries out various types of public awareness raising programs on disaster management. A National Emergency Operation Center (NEOC) is into operation in the premises of the Ministry since December 2010. NEOC sends informative messages through mass media in order to make the people aware of the natural disasters. The function of disaster data collection and dissemination are also being done by the NEOC. The Ministry has central database system which publishes annual report, maps, booklets, pamphlets, posters and other materials for disaster information for professionals and concerned agencies and people.

However, it is realized by the disaster stakeholders and general public that the disaster prevention, preparedness and rehabilitation works are often ignored or underserved. While the casualty and property losses are in increasing trend.<sup>8</sup>

### 4. Preparedness Strategy of the Government

After the devastating floods and landslide disaster of 1993 July in which 1336 people lost their lives

and 85,451 families were affected the Government of Nepal has been serious in the management of natural disasters in the country. Therefore, the Government prepared a National Action Plan on Disaster Management in 1996 which has specified priority activities to be undertaken in the field of disaster management to be implemented by the concerned agencies.<sup>5</sup>

The formulation and implementation of National Strategy for Disaster Risk Management (NSDRM) in 2009 is another step to mainstream disaster risk reduction activities in Nepal.<sup>7</sup> With regard to disaster management, both (the Plan and Strategy) depict in matrix form the priority item groups and activities together with the responsible executing agency and the cooperating agency in national hazard assessment, awareness raising, training, information system, land use plan, disaster reduction policy, regional and sub-regional cooperation between and among countries and establishment of documentation center on disasters.<sup>11</sup>

Therefore, the Government aims to:

- Reduce the loss of life and property;
- Address the sufferings of the people;
- Effect land use planning;
- Prepare and develop hazard maps of the disaster prone areas;
- Make the people aware of natural disasters;
- Make coordination among different agencies involved in disaster management;
- Mobilize the non-governmental sector in rescue and relief works as well as awareness raising programs;
- Mobilize internal and external resources for rehabilitation and reconstruction;
- Provide training at the grassroots level for the management of disasters;
- Build capacity on disaster management.

The above are the main strategies that the government has taken after the lessons learnt from the flood and landslide disaster of 1993.

### 5. Problems<sup>9</sup>

The disaster risk reduction plans and policies lack adequate attention in the field of pre-disaster works. Large parts of the population in the country are still not aware of natural disasters. Though, the country is suffering from a number of disasters every year, the studies regarding to identify most

vulnerable places and types of disasters are still inadequate. Prioritized hazards and their preparedness and mitigation efforts are completely lacking. Similarly, the pre, during and post disaster activities for different hazards are yet to be established. In addition to the above drawbacks, lack of proper policy and legal environment is the biggest impediment for an effective disaster management system in Nepal. Other major problems can be pin pointed as following:

- (i) Limited resources
- (ii) Remote, rural and difficult geophysical condition of the country
- (iii) Inadequacy of infrastructure facilities
- (iv) Low literacy rate, lack of public awareness and the misconception of the people (some people especially illiterate rural people think that the natural disasters are the act of god. They seldom know that preventive measures can reduce the impact of natural disasters).
- (v) Absence of modern technology including early warning systems
- (vi) Ineffective coordination
- (vii) Reactive approach
- (viii) There is a small number of NGOs willing to work in disaster preparedness, mitigation and rehabilitation works
- (ix) Rapid urbanization and unplanned settlements.

## 6. Solutions to Solve the Problems<sup>9</sup>

In view of the above problems, in brief, the following solutions can be suggested to address them:

- (i) Avail adequate funds and resources
- (ii) Infrastructure development
- (iii) Mass education, literacy and awareness campaign in order to educate and aware the people.
- (iv) Advancement in technology including the development of early warning systems
- (v) Effective coordination among disaster related agencies
- (vi) The Act should be amended or revisited in order to make it

- proactive
- (vii) A separate agency should be constituted to address the whole cycle of disaster preparedness, mitigation, response and rehabilitation works
  - (viii) NGOs Need to be Motivated to Work in the disaster affected remote Areas
  - (ix) Planned settlements are needed. Building code should be strictly implemented.

We know that natural disasters cannot be stopped. However, the extent of disasters can be reduced, if preventive measures be taken in due time for which pragmatic government policies and public awareness raising programs are of utmost importance. For this the government and the community should work in a cooperative manner. Moreover, the effects of natural disasters in various parts of the world have shown the necessity to intensify international cooperation for disaster mitigation. Above all, in the time of Natural Disasters local people are the main responders. Usually local police, local administration and the central government come into the forefront bit later. Often it is bit late after international communities appear at the disaster site. Therefore, it is necessary to strengthen local communities. Nevertheless, international communities should be involved in disaster preparedness and reconstruction works.<sup>10</sup>

## 7. The Bill

Keeping in view the need and importance of a proactive law for the disaster management system in Nepal, the Nepal Centre for Disaster Management (NCDM)<sup>1</sup> drafted a new disaster management Bill and policy in the year 2007, and submitted them to the government for consideration. The Bill and policy drafted by the NCDM was an outcome of rigorous work done by its members who organized a series of meetings, workshops and interactions with disaster management stakeholders from central to local level in Nepal in the course of finalizing the draft.<sup>3</sup>

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<sup>1</sup> Nepal Centre for Disaster Management (NCDM) is a specialized agency in disaster management policy and education in Nepal. It is represented by high level professionals from academia, bureaucracy, media etc.

The Bill and policy were revised by the relevant government agencies since then. After a series campaigns and pressures from the civil society; particularly from NCDM and DPNet-Nepal, the Bill was forwarded to the Constituent Assembly in April 2012. In the meantime, the Constituent Assembly was dissolved on 27 May 2012. As a result, the Bill could not become an Act and now it has to wait for the future Constituent Assembly or Parliament. We hope that the Bill will be approved soon. Actually, the Bill when it becomes the Act and starts functioning will open avenue for effective disaster management system in Nepal.

## **8. Way Forward**

At present, lack of proactive policy and legal instruments are the biggest impediments. Such condition hinders replication of the successful cases to other places although there are high potentials for the same. Absence of organizational outfit at the highest level that could be tasked to provide intellectual and at Ministerial leadership is seriously noted in Nepal. In fact, the country could learn from the experiences of the other countries like China, Japan, India, Bangladesh and many other nations where the Prime Minister or other top level authority lead or guide the disaster risk reduction activities. Thus, improving on the role of leadership and the creation of the National Disaster Risk Management Council or Disaster Management Authority, backed up by appropriate legislative instrument, seems to be the priority agenda for Nepal.

## **9. Conclusions**

It is a big concern among the disaster affected population and also the disaster management professionals that the DRR activities are limited in carrying out immediate rescue and relief works on an ad hoc manner. Hence, there is the need as well demand for vigorous change in the existing legal system. The start point is the enactment of the proposed Disaster Management Bill which is supposed to pay due attention to disaster preparedness, mitigation and rehabilitation works and reduce the heavy loss of lives and properties by adopting proactive actions. Above mentioned solutions could help as the tool to solve the existing problems to a greater extent. Disaster mitigation, early warning system, insurance system,

emergency rescue and relief operation, rehabilitation and recovery plans should involve activities such as training, post-disaster evaluation, monitoring of relief works, review and cooperation and coordination of Central, District and Local level preparedness and research works. Recovery planning should involve immediate recovery as well as long-term programs. Political determination, effective and efficient policy implementation and people's participation is of great importance for functional disaster governance.

Finally, emergency response planning and capacity enhancement, strengthening policy and legal environment, efficient and effective reconstruction and rehabilitation works are particularly necessary. To attain this goal a separate Ministry or Council or Authority for disaster management in Nepal is extremely desirable for effective disaster prevention, preparedness, response and recovery.

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