

EFFORTS OF NEPAL TOWARDS BUILDING A DISASTER RESILIENT COUNTRY

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ABSTRACT

With its unique geo-physical settings and socio-economic conditions, Nepal is highly vulnerable to natural disasters and climate risks. A combination of poverty, climate change, rapid urbanization and mountainous terrain makes Nepal highly prone to disasters. The 2014 flood and landslide in the Mid West and Sindhupalchowk followed by 25th April and 12th May 2015 devastating earthquake clearly indicate that flood, landslide and the earthquake are deadly threat because of the likelihood of massive loss of lives and infrastructures, particularly in densely populated area. History of systematic disaster risk reduction practices in Nepal goes back to 2009 when Government launched Nepal Risk Reduction Consortium and also launched the National Strategy for Disaster Risk Management in the same year. Nepal's efforts towards building resilient communities are grounded on five Flagship priorities in coordination and collaboration of humanitarian agencies, financial institutions and development partners. Flagship 4 under NRRC has identified nine minimum characteristics of resilient community targeting to reach 1000 VDCs in five years starting from 2009. The Natural Calamity (Relief) Act 1982, the Local Self Governance Act 1999, National Strategy for Disaster Risk Management 2009, Central Disaster Relief Committee, Local Disaster Risk Management Planning Guideline 2011, District Disaster Risk Management Planning Guideline, Disaster Preparedness and Response Plan in the District, National Disaster Response Framework, National Adaptation Program of Action, Local Adaptation Plan for Action and National Building Code 1993 are some of the key policy documents that Nepal has prepared so far towards its attempt in building resilient communities.

Key words: Geo-physical, Vulnerable, Natural Disasters, Climate Risks, Climate Change, Rapid Urbanization and Mountainous Terrain, Nepal Risk Reduction Consortium (NRRC), Flagship Priorities

1. INTRODUCTION

Nepal with its 29 million people, one of the poorest and least developed countries in the world, is ranked among 4th high risk countries in terms of climate risk, 11th at earthquake risk and 30th for flood risks globally (CRED, 2007). This situation is further compounded by adverse climatic conditions, topographic features, environmental degradation, population growth, haphazard urbanization; unplanned development practices, poverty, social and income inequality, gender and caste based discrimination, physical ability and political situation of the country.

Due to diverse geo-physical set up of the country, Nepal experiences wide range of weather conditions ranging from year round chilled weather in the mountain followed by moderate in the hills and tropical in the flat land. On account of its multilayer vulnerabilities, Nepal has witnessed an increase in the frequency and intensity of disasters in the recent years; 2014 Jure Sindhupalchowk Landslide, 2014 Mid West Flood and Landslide followed by devastating April

and May 2015 Earthquake are some of the recent examples to prove this. Considering the size, scale, frequency and intensity of disasters in Nepal; the Government of Nepal, donor communities, Humanitarian Agencies and Civil Society Organizations are putting effort in building resilient communities both in rural and urban areas through the provision of DRR policies, guidelines, plans and resources from the government side and humanitarian agencies are working in selective disaster prone communities to build community resilience following CBDRR approaches, methodologies and tools; which is mainly guided by the National Strategy for Disaster Risk Management 2009.

2. Nepal disaster profile and vulnerabilities

Nepal has fragile geology and steep topography make 20th topmost disaster prone country in the world. Among 200 countries, Nepal ranks 4th, 11th and 30th with regard to relative vulnerability to climate change, earthquake and flood hazards respectively. It faces high magnitudes and intensities of a multitude of natural hazards such as flood, landslide, earthquake, fire, hailstone, windstorm, thunderbolt, cloudburst, drought, Glacier Lake Outburst Flood (GLOF), avalanches and epidemics. Geological, ecological and hydro meteorological phenomena; demographic, such as rapid population growth and increasing population density; high degree of environmental degradation particularly deforestation, fragility of landmass, wider spread poverty, poor building practices and no enforcement of building codes and unplanned urban development, insufficient emergency preparedness and lack of awareness, political instability and conflict and topography which poses huge infrastructural challenge are some of the contributing factors to increase disaster vulnerabilities in Nepal .

The data on human mortality for the period 1971-2007 shows more than 27,000 deaths; 50,000 injuries, 3,000 missing and approximately 5 million affected people (MoHA). Nepal Earthquake 2015 took over 8,790 lives and injury to 22,300 people and impacting eight million people, almost one-third of the population of Nepal. Thirty-one of the country's 75 districts have been affected, out of which 14 were declared 'crisis-hit' for the purpose of prioritizing rescue and relief operations. It is estimated that the total value of disaster effects (damages and losses) caused by the earthquakes is NPR 706 billion (US\$ 7 billion) which is equivalent to about one third of the Gross Domestic Product (GDP) in FY 2013-2014. Of that amount, NPR 517 billion (or 76 percent of the total effects) represents the value of destroyed physical assets, and NPR189 billion (24 percent of the total effects) reflects the losses and higher costs of production of goods and services arising from the disaster.¹

August 2014 flood and landslide that took place in various parts of the country killed hundreds, many are still missing and about 20,000 were displaced, thousands acres of agriculture land was swept away destroying thousands of houses in the districts. In September 2011, an earthquake measuring 6.9 Richter scale devastated the eastern parts of Nepal with the losses crossing an estimated 4 billion rupees. Similarly, the breaking of the Koshi embankment caused a massive damage to lives and properties in the eastern parts in 2008. The flash floods of 2009 in Kailali and Kanchanpur and landslides in Doti and Accham districts damaged infrastructure and properties of worth billions of rupees. The epidemic in Jajarkot and Rukum districts in 2009 also killed a number of people. According to a study, during the period between 1971-2010, more than 50,000 people were reportedly injured and more than 27,000 reportedly died and recent earthquake has bitter test in the disaster history.

3. Existing institutional arrangement for disaster risk management in Nepal

The legal framework for disaster management has a long history in Nepal with the Natural Calamity (Relief) Act 2039 promulgated in 1982. This Act allocated the responsibility for preparing and responding to disasters in Nepal to the Government. The Act, for the first time in history of Nepal, provided for a disaster management administrative structure in the country.

At the central level, it constituted the Central Disaster Relief Committee (CDRC) with the Minister of Home Affairs as the Chair. The 36-member apex body for disaster management comprises the Secretaries of the Ministries of Finance; Defense; Federal Affairs and Local Development; Urban Development; Health and Population; Agriculture Development; Education and Sports; Environment, Science and Technology; Land Reform and Management, Industry Commerce and Supplies; Foreign Affairs; Water Resources; Information and Communication; Forest and Soil Conservation; Women, Children and Social Welfare, and representatives from the Nepal Army, Nepal Police and Nepal armed Police, and also from the Nepal Red Cross Society, Nepal Scout, Social Welfare Council and the Department of Mines and Geology, the Department of Water Induced Disasters, and the Department of Hydrology and Meteorology.

The Natural Calamity (Relief) Act, 1982 provides for the establishment of regional committees as and when required. During the 1988 earthquake affecting eastern Nepal and the 1993 floods in south-central Nepal, Regional Service Centre established respectively at Biratnagar and Simara provided relief coordination demonstrating the usefulness of setting up regional committees to coordinate relief activities related to more than one district. However, these centers were closed after the emergency operations were over.

District Disaster Relief Committees (DDRC) is a permanent outfit at the district level to coordinate relief and preparedness. DDRC is chaired by the Chief District Officer (CDO) who is the main administrative functionary to maintain law and order at the district level. Other members to DDRC are the representatives of the district level offices of the various public sector agencies such as district water supply office, district education office and district health office. The Local development Officer (LDO) – the district level officer of the Ministry of Federal Affairs and Local Development, who coordinates development works with the elected bodies at the district level, is the member-secretary of DDRC. At the village level, there is Village Disaster Response Committee led by VDC Secretary.

4. Policies and Programmes

4.1. National Strategy for Disaster Risk Management (NSDRM) 2009: The NSDRM was promulgated in 2009. This strategy has been developed on the base of Hyogo Framework for Action (HFA) 2005. A detailed process was adopted during the preparation of the NSDRM, 2009. Multiple occasions were organized to solicit the view of governmental, non- governmental agencies, local bodies, academic institutions, private sector, UN agencies, INGOs, and civil society organizations. The long term vision of the strategy is to develop Nepal as a disaster-resilient community. It has also a mission to provide guidance and ensure effective disaster management through development and implementation of the concept of effective preparedness for mitigation, disaster risk reduction and incidence of calamities. Besides this, the strategy has been adopted the following directive principles for disaster risk management.

- Mainstream DRR concept into the development plan
- Ensure life safety and social security

- Give emphasis to gender and social inclusion
- Adopt decentralize process of implementation
- Follow the holistic approach
- Give priority to staff safety and security
- Follow one-window policy and cluster approach in implementation of DRM
- Work in the spirit of participation, interaction, and coordination

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

The strategy has also proposed new institutional arrangement for disaster management which entails the formation of a National Disaster Management Council (NDMC) being chaired by Prime Minister. Besides, it also envisions National Disaster Management Authority (NDMA) as a secretariat of the council where other three committees under the council for preparedness, rescue and relief and reconstruction and rehabilitation activities. The strategy realizes that disaster management is possible only through integrated, participatory, and collaborative involvement of all partners. As such due importance is given to UN agencies, donor communities, inter-governmental agencies, I/NGOs, and people from different segments of civil societies.

4.2 Flagship Approach on Disaster Risk Reduction

An International Consortium was formed in May 2009 to support the Government of Nepal to develop a long term Disaster Risk Reduction Action Plan building on the National Strategy for Disaster Risk Management (NSDRM). Members of the Consortium are the Asian Development Bank (ADB), the International Federation of the Red Cross and Red Crescent Societies (IFRC), United Nations Development Programme (UNDP), UN Office for the Coordination of Humanitarian Affairs (OCHA), UN International Strategy for Disaster Reduction (ISDR) and the World Bank. In addition, the Consortium initiated a multi stakeholder participatory process with the Government of Nepal and civil society organizations to identify short to medium term disaster risk reduction priorities that are both urgent and viable within the current institutional and policy arrangements in the country. Based on the priorities set by the government and also discussions with multi-stakeholder groups, five flagship areas of immediate action for disaster risk management in Nepal are as follows:

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

4.3. Periodic Plans

Disaster Management Program was first included in the 10th national plan (2002-2007) of the government of Nepal. Chapter 17 emphasized on the irrigation and water induced disaster

control, where as chapter 22 deals on population, environment and natural and human induced disaster management. Both chapters reiterate the priority on policy formulation, strengthening institutional mechanism, risk assessment, information collection and dissemination regarding the disaster management. Both chapters also emphasized on the low costs disaster resilience construction practices. Similarly, the Three Year Interim Plan (2007/08-2009/10) devoted separate chapter (chapter 26) on natural disaster management. The interim plan emphasizes on policy formulation, strengthening institutional mechanism, EWS, coordinated approach for DRR and linking disaster management with climate change. It is hoped that this attempt would be a landmark in the history of Disaster Management. The plan has set up its vision to minimize social and economic loss and damage caused by disasters. The main objective of plan is to promote the security of life and property from the impact of natural disasters through sustainable, environment-friendly and result oriented development by making disaster management practices efficient, competent, strengthened and effective.

Develop and apply environment-friendly systems in development and construction works, appropriate information flow and pre- disaster preparedness for the mitigation of risks of natural disaster, strengthen collaborative works between the government, non government and private sector for rapid response and recovery are the major strategies of the plan. The plan has listed the programs of formulation of national strategy, awareness raising, preparedness for effective response and recovery, study and research, risk and hazard zone mapping, stockpiling of relief and rescue materials, and enhancement of involvement of local bodies. Current 12th three year development plan (2010/11-2012/13) was also devoted separate chapter for disaster management issues. This plan addressed disaster management issues more comprehensively, 12th three year development plan set its disaster management goal to achieve goal of Hyogo Framework for Action by 2015. Long term goal of the plan is to develop disaster resilient Nepal. Moreover, mainstreaming disaster risk reduction, institutional and legal reform and preparedness for better response are the strategies of this plan. Other policies and plans on disaster risk management include; Soil and water conservation act, 1982, Nepal building act, 2007 and Building Code, 1994; Environmental protection act, 1996; National agriculture policy, 2004; National shelter policy, 1996; National urban policy, 2006; National water plan, 2005 and Water resource policy, 1993; National water resource strategy, 2002; Water induced disaster management policy, 2006 and Strategies related to health sector.

5. Progress made so far

In line with HFA priorities and the commitments made by Nepal to achieve its targets by 2015; Nepal has achieved the following progresses which are also featured in HFA final report.

Strategic goal 1: *The more effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction.*

- The 10th five year plan (2002-2007) underscored that the main objective of DRR as to contribute substantially to make the public life secure by managing the natural and man-made disaster systematically and effectively.
- The 3-year interim plan (2008-2010) also emphasized that DRR is an integral component of sustainable development and is accorded priority to pre-disaster preparedness.
- National Strategy for Disaster Risk Management (NSDRM) 2009 has been adopted.
- Sixty Seven districts have disaster preparedness plans.

- At local level the 3-year interim plan (2008-2010) has envisaged to enhance the engagements of local bodies and communities in the prevention works.
- 5 municipalities have started implementing safe building construction practices using the seismic code provisions in the local context.
- Multi-Hazard Risk Assessment has been done which covers five major hazards.

Strategic goal 2: *The development and strengthening of institutions, mechanisms and capacities at all levels, in particularity the community level that can systematically contribute to building resilience to hazards.*

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

Strategic goal 3: *The systematic incorporation of risk reduction approaches into the design and implementation of emergency preparedness, response and recovery program in the reconstruction of affected communities.*

- Disaster preparedness and response workshop has been conducted at national, regional and district level with multi-stakeholders involvement.
- One window policy and cluster approach in emergency response has been successfully realized in dealing with different disasters in the past.
- For initial damage and loss estimation, a standard information collection process using multi-sectoral Initial Rapid Assessment (MIRA) has been practiced since 2009.
- 80 open spaces for evacuation during emergencies have been identified within Kathmandu valley
- Three seismic resistant emergency water supply system in two largest open spaces have been installed and are brought in practice during earthquake response
- Tribhuvan University Teaching Hospital has provided with seismic resistant emergency water system to operate during emergency
- Ware houses in Tribhuvan International Airport, TU in Kirpopur and Khumaltar of Lalitpur have been established and brought into operation
- National Emergency Operation Center (NEOC) at MOHA followed by District Emergency Operation Centers in various parts of the country have been established
- Hospital Preparedness for Emergencies (HoPE), Medical First Respondent (MFR) and Collapsed Structure Search and Rescue (CSSR) training are being given to Medical officers and security officers.

- Earthquake Simulation Exercise (INSARAG) has been conducted in 2009.
- Model agreement between GON and UN to expedite import/export and transit of relief consignments in the event of disasters and emergencies was signed on 31 May, 2007.
- A comprehensive Logistics Capacity Assessment of Nepal has been done.
- Mass Casualty Management Strategy, Dead Body Management Strategy, Debris Management Strategy, Early Warning System Strategy etc have been developed, endorsed and brought into operation

6. Challenges in building disaster resilient communities in Nepal

a) Mainstreaming DRR/CCA

- The new development policy of Nepal acknowledges the incorporation of DRR/CCA into development plans. However, what is reflected and underscored in the plans is not substantiated in the annual programs and budgets.
- One of the reasons for this is lack of tools to assess contribution of an investment in development sectors towards disaster resiliency of a community and/or nation.
- A separate and robust mechanism is required in place to assess disaster resiliency of communities both in rural and urban setting and also of its contribution toward disaster resiliency of a community.
- There is urgent need to bring Urban DRR/CCA strategy to address the urban vulnerabilities

b) Policy provisions, Institutional mechanism and National capacity on DRR/CCA

- Two vital documents, DM Bill and DM Policy, those are pending to endorse, needs to be taken as urgent priority for their endorsement and operation
- Reconstruction Authority should be brought into full operation soonest possible to address the impact of recent earthquake
- The emergency response and relief approach is so entrenched in the current system that it will take time to mobilize the system to more comprehensive disaster risk management approach.
- Although emergency response has been the main thrust of the disaster risk management in the previous years, it was basically ‘wait and see’ approach with spontaneous reactions to provide rescue and relief.
- SOPs have not been fully developed, institutional mechanisms are in need of strengthening
- There is need to develop network of EOC across the country from central to local level.

7. Conclusion

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

National Emergency Operations Centre (NEOC) facilitates effective emergency management. National Platform on DRR has been formed to make DRR effort more cooperative and

collaborative between governmental and non-governmental actors. DRR Focal desk has been instrumental for effective implementation of disaster risk reduction related policies and programs in relevant ministries, departments, security agencies and local bodies.

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

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