



**Government of Nepal**  
**Ministry of Home Affairs**

**National Position Paper**  
on  
**Disaster Risk Reduction and Management**  
Nepal



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# Disaster Risk Reduction and Management in Nepal

## 1. Introduction

### 1.1 Country Background

Nepal is predominantly a mountainous country in South Asia. It lies in between 80°4' to 88°12' East longitude and 26°22' to 30°27' North latitude. It has an area of 147,181 sq. km. extending roughly to 885 km. from East to West and varies from 145-241 km. North-South. The country is land locked bordering with India on the East, West and South, and China on the North. The altitude ranges from a minimum of 70 meters to a maximum of 8,848 meters whereas the climate varies with its topography and altitude. Mount Everest, the highest peak of the world, is both the identity and glory of this Himalayan country. The average width (North to South) is 193 kilometres whereas the average length is 885 (East to West) kilometres. The country has great variety of topography which is reflected in the diversity of weather, vegetation and climate. A combination of rugged topography, high reef, active tectonic process and intense monsoon rain has made this fragile environment vulnerable to various types of disasters. "The country stands at the top 20<sup>th</sup> list of the most multi-hazard prone countries in the world. The country is ranked 4<sup>th</sup>, 11<sup>th</sup> and 30<sup>th</sup> in term of climate change, earthquake and flood risk respectively."(UNDP/BCPR, 2004).

Specially, the country experiences tropical, mesothermal, micro-thermal, taiga and tundra types of climate. Nepal is a multi-ethnic, multi-lingual, multi-religious and multi-cultural country. The last Census of 2011 revealed that there are 123 languages being spoken in Nepal whereas 125 Caste and ethnic group residing in a uniquely harmonized Nepalese society. Nepali stands as the official language of the country. There were recorded ten different religions, viz., Hindu, Bouddha, Islam, Kirat, Christian, Prakriti, Bon, Jain, Bahai and Sikha respectively by their dominance in the last census 2011. Also known as the light of Asia, Lord Gautam Buddha was born in Lumbini of Nepal some 2500 years ago. As a distinct symbol of the country, Nepal has a flag with unique triangular shape in contrast to rectangular shape of almost all countries in the world. (CBS, 2014)

A significant proportion of Gross Domestic Product (GDP) is lost every year due to large, medium and small scale disasters. Disasters cost the government about 6% of its annual development expenditure per year. Recent estimates indicate that the negative impact of weather variability is equivalent to around 2% of current GDP per year rising to 5% or more in extreme monsoon flood years. These impacts are expected to increase significantly due to climate change. (GADRRRES, 2014).

## **2. Disaster Scenario of Nepal**

Nepal is facing the fury of natural and human induced disasters with greater frequency and intensity. People in Nepal live with hazards, accepting them as the way of life. Disasters are so penetrative in every Nepalese geographic and societal framework that the people are constantly under the threat of a multitude of natural disasters. The earthquake of 1934, 1980, 1988, 2015 and the flood of July, 1993, 2008, 2013, 2014 and 2017 are the most devastating disasters which not only caused heavy losses to human lives and physical properties but also adversely affected the development process of the country as a whole. The lessons of the 1988 earthquake and 2015 Gorkha Earthquake, 1993 flood and landslide, 2008 Koshi floods and 2013 floods and landslide in Far Western Region, 2014 flood and landslide in Mid-Western Region and 2017 floods and landslides in Eastern and Central Region have brought about a shift of attitude on the part of planners, government, donor agencies, NGOs and INGOs towards the need for a coordinated disaster preparedness and response mechanism. Fire is another disaster which occurs on a regular basis and wild fires are damaging to already severely depleted forests and biodiversity of Nepal which results on economic loss, land degradation and environmental pollution. Hence, Nepal is considered as the 'hot spot' of disasters.

If we analyse the disaster data of Nepal, we can perceive that the human life loss and property losses are in increasing trend. This is basically due to the low level of preparedness.

**Table 1**  
**Human Deaths From Major Disasters Since 2000 to 2017**

Year	Flood & landslide	Thunder-bolt	Fire	Hail-stone	Wind-storm	Avalanche/ Snowstorm	Epidemics	Earthquake	Total
2000	173	26	37	1	2	-	141	0	380
2001	196	38	26	1	1	-	154	1	417
2002	441	6	11	0	3	-	0	0	461
2003	232	62	16	0	20	-	0	0	330
2004	131	10	10	0	0	-	0	0	151
2005	141	18	28	0	0	21	41	0	249
2006	141	15	3	1	0	-	34	0	194
2007	216	40	9	18	1	6	0	0	290
2008	134	16	11	0	2	0	3	0	166
2009	135	7	35	0	0	2	10	0	189
2010	240	70	69	0	2	2	462	0	845
2011	263	95	46	2	6	0	36	0	448
2012	123	119	77	0	18	9	9	6	361
2013	219	146	59	0	3	7	4	0	438
2014	241	96	62	0	3	38	12	0	452
2015	293	115	53	0	2	2	18	9366	9849
2016	297	105	85	0	4	0	14	0	505
2017	236	85	63	0	5	1	10	0	400
<b>Total</b>	<b>3852</b>	<b>1069</b>	<b>700</b>	<b>23</b>	<b>72</b>	<b>88</b>	<b>948</b>	<b>9373</b>	<b>16125</b>

Source: Ministry of Home Affairs// drrportal.gov.np

The above Table 1 shows human casualties from floods, landslides, thunderbolts, fires, hail-stones, wind-storms, avalanches, snow-storms, epidemics and earthquakes in 18 years (2000 to 2016) time period. As shown in the above figures, the massive earthquake of 2015 Gorkha earthquake alone caused the loss of 9366 human lives. The Post Disaster Needs Assessment (PDNA) accomplished within a month of the earthquake not only did an assessment of the damage and loss, it also outlined a recovery strategy together with an estimation of recovery cost for 23 thematic areas.<sup>1</sup> The PDNA also recommended that the post-earthquake recovery and reconstruction had been "multi-pronged effort with a strong orientation toward the poorest and the most vulnerable" with support from the private sector, NGOs, and international development partners. On the other hand, it is estimated that 2017 floods caused total of USD 584.7 million losses and USD 705.1 million USD required to meet the recovery needs (PFRNA 2017, NPC).

The types of natural and human induced hazards prevailing in Nepal and the locations are given in the following Table 2.

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<sup>1</sup> The PDNA came up with an estimation of US\$ 6.7 billion for the rehabilitation and reconstruction costs over a number of years, which the Government later revised the figure to nearly US\$ 8 billion.

**Table 2: Types of Natural and Human-Induced Hazards in Nepal**

<b>Types of Hazard</b>	<b>Prevalence</b>
<b><i>Natural Hazards</i></b>	
Earthquake	All of Nepal is a high-hazard earthquake zone
Flood	Terai (sheet flood), Middle Hills
Landslide and landslide dam breaks	Hills, Mountains
Debris Flow	Hills and Mountain, severe in areas of elevations greater than 1700 m that are covered by glacial deposits of previous ice-age
Glacier Lakes Outburst Floods (GLOF)	Origin at the tongue of glaciers in Higher Himalayas, Higher Mountains, flow reach down to middle Hill regions
Avalanche	Higher Himalayas
Fire (forest )	Hills and Terai (forest belt at foot of southern-most Hills)
Drought	All over the country
Windstorms	All over the country
Hailstorm	Hills
Lightening	All over the country
<b><i>Human-Induced Hazards</i></b>	
Epidemics	Terai and Hills, also in lower parts of Mountain region
Fire (settlements)	Mostly in Terai, also in mid-Hill region
Road Accidents	Urban areas, along road network
Industrial/Technological Hazards	Urban / industrial areas
Soil erosion	Hills
Social Disruptions	Follows disaster-affected areas and politically disturbed areas

Source: Nepal Country Report: ISDR Global Assessment Report on Poverty and Disaster Risk 2009.

### **3. Fundamental Problems Associated with Disasters**

Nepal is facing increased disaster risks from a full range of known and previously unknown hazards. Disaster consequences are having greater adverse effects on populations, built structures, the livelihood and environments. It is an unpleasant fact that the vulnerability of human settlements to natural disasters is continuously rising because of misappropriation of natural resources by deforestation, encroachment of the flood plains, environmental degradation, haphazardly planned development projects and heavy influx of population to the urban areas in search of employment and livelihood. Though the capacity of Nepal to prepare and respond to disasters has improved but requires further strengthening and sustained efforts to build a disaster resilient Nepal through the promotion of inclusive community based DRR and health sector preparedness plan in both rural and urban contexts.

The vulnerable communities and poor people have not been able to mitigate, prepare for, effectively respond to and overcome the impact of multiple hazards in various parts of the country. Often women, children, elderly and disadvantaged persons become unable to cope with the disasters as their capability and resilience is meagre. Therefore, it is highly necessary to build the capacity of the vulnerable communities in order to reduce the losses of human lives and physical properties in the time of disasters.

Factors such as demographic pressure, poor urban planning, settlements in high-risk areas and reduced livelihood options entail a high vulnerability to more frequent, more intense and more unpredictable disasters. Occurrences of disasters are random and unpredictable but not entirely uncontrollable events. We have learnt from the past disasters (e.g. 2015 Gorkha Earthquake and the floods and landslide of 2017) that we can significantly reduce the impact of natural disasters through

disaster mitigation efforts (e.g. by building earthquake resistant infrastructures). However, such efforts must be integrated into development projects in order to build a culture of preparedness and prevention.

As the impacts will forever affect landscape, people, society, and livelihoods – there is no choice but to adapt to hazards. Living not only with earthquakes, but also with many other hazards in daily life is the destiny of Nepalese people. Yet, the Nepalese and their neighbours and friends all over the globe, have to reconcile themselves to the fact that tens of kilometres beneath where they live, the Indian and Eurasian plates will continue their tussle again and again. In that journey, they must build on the fundamental strengths they possess—social capital and community resilience.

## **4. International and National DRR Initiatives**

### **4.1 Overview**

The need and importance of international cooperation, coordination and collaboration is desirable in disaster risk reduction and management activities. With this in view, Nepal has actively participated and contributed in various international DRR activities. Nepal is one of the active members of international DRR community and has adopted the major decisions. Moreover, Nepal has always expressed commitment to fulfil its obligations and priority action within the given time frame. In this section, the national and international DRR instruments as well as major legislative and institutional initiatives taken by Nepal in the recent past and present to reduce the disaster vulnerability will be briefly discussed.

## **International Initiatives**

### *4.1.1 Yokohama Strategy, Japan (1994)*

The first world conference on disaster risk reduction was held in Yokohama, Japan in 1994 where Nepal participated and presented a national action plan on disaster management. Government of Nepal had prepared "National Action Plan on Disaster Management in 1996" incorporating all disaster management cycle and the Yokohama Strategy.

### *4.1.2 Hyogo Framework of Action (HFA) (2005-2015)*

The second world conference on disaster risk reduction was held in Kobe, Hyogo, Japan in 2005 and Nepal participated and endorsed the goals and 5 priorities for action between 2005 and 2015. Integration of DRR into sustainable development, develop and strengthen institutions to build resilience to hazards and emergency preparedness, response and recovery programs were the major goals of HFA.

### *4.1.3 Sendai Framework for Disaster Risk Reduction (2015-2030)*

The Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030 was adopted in Sendai, Japan, on March 18, 2015. The SFDRR's four priorities for action are targeted to achieve by 2030.

**The government of Nepal has prepared Disaster Risk Reduction National Strategic Action Plan (NSAP) (2018-2030) in which DRR activities have been prioritized corresponding to the four priorities of the SFDRR.**

### *4.1.4 The Sustainable Development Goals*

The 17 Sustainable Development Goals (SDGs) were adopted by the world leaders in September 2015 at an historic UN Summit and it came into force on 1 January 2016. Government of Nepal has also prepared and implemented a fifteen-year Sustainable Development Agenda of Nepal (2015-2030), in which DRM has been prioritized.

#### *4.1.5 The Global Platform 2017*

The Fifth Session of the Global Platform for Disaster Risk Reduction (GP2017) took place from 24 to 26 May 2017 in Cancun, Mexico. It was the first one to take place after the adoption of the Sendai Framework for Disaster Risk Reduction (2015-2030), as well as the adoption of the 2030 Agenda for Sustainable Development Goals and the Paris Climate Change agreement.

#### *4.1.6 The Paris Agreement on Climate Change*

The 2015 United Nations Climate Change Conference, COP 21 or CMP 11 was held in Paris, France, from 30 November to 12 December 2015. On 12 December 2015, Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a landmark agreement to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future.

**Nepal is committed to the Paris Accord and has taken several steps to implement the same to reduce the impact of climate change in Nepal and beyond.**

#### *4.1.7 Addis Ababa Action Agenda (AAAA)*

Addis Ababa Action Agenda of the Third International Conference on Financing for Development (Addis Ababa Action Agenda) took place in Addis Ababa, Ethiopia from 13–16 July 2015. The Heads of State and Government and High Level Representatives confirmed their strong political commitment to address the challenge of financing and creating an enabling environment at all levels for sustainable development in the spirit of global partnership and solidarity.

#### *4.1.8 The Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) 2016*

The 2016 Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) was held in New Delhi, India from 3-5 November 2016. It endorsed the Asian Regional Plan for the implementation of the SFDRR for 15 years (2016 – 2030) with specific targets and be achieved by 2016, 2018, 2020, 2022 and 2030. The regional plan will be monitored in every two years period at regional level.

#### *4.1.9 The Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) 2018*

Governments and other stakeholders from the world's most disaster-prone region will meet in Mongolia in July 2018 to discuss acceleration of efforts vital for the sustainable future of the region including how to prevent disasters and tackle climate change while reviewing progress in reducing disaster losses. The Asian Ministerial Conference on Disaster Risk Reduction (AMCDRR) is being organized in every two years' time. The theme of the AMCDRR 2018 'Preventing Disaster Risk: Protecting Sustainable Development' reflects the spirit of the Sendai Framework. This theme is associated with the theme of the 2018 High-level Political Forum on Sustainable Development that focuses on 'Transformation towards sustainable and resilient societies'.

**Nepal will share its good practices, knowledge and lessons learned on disaster risk reduction in the past by presenting papers at the AMCDRR 2018. The AMCDRR will provide ample opportunities to gather and share information and experiences with fellow delegates from other countries and organizations that will help to make Nepal a disaster resilient country and others too for disaster resilience.**

## **National Initiatives**

### **Background:**

Nepal has achieved notable progress in DRM/CRM during the last few decades. A number of legal, institutional and policy frameworks are already in place. The New Constitution of Nepal has made provisions of disaster management in different levels of governments. The formulation of policy and legislative procedures on disaster issues in Nepal dates back in early 1980s when Natural Calamity (Relief) Act, 1982 was enacted. Prior to 1982, rescue, relief as well as recovery works were carried out in an ad-hoc basis, primarily as a social work. The Natural Calamity (Relief) Act, 1982 did perform a mission to formalize disaster response as a responsibility of the government to provide relief to the victims of the disaster-events, and it designated authorities at the Central, Regional and district levels to coordinate the rescue and relief efforts of various response agencies. The Parliament of Nepal last year endorsed the Disaster Risk Reduction and Management (DRR&M) Act, 2017 that formally replaced the Natural Calamity (Relief) Act 1982. This is more comprehensive and addresses the complex dynamics of all phases of disaster management.

The major legal tools developed by the government are as following:

#### ***4.1.10 Disaster Management in Nepal's Constitution, 2015***

The Constitution of Nepal has clearly stipulated that DRM is a shared responsibility at all levels of government. The Constitution states that the responsibility of disaster management falls under the jurisdiction of federal, provincial and local government. Of the 22 tasks assigned to local level, DRM is one of them (Schedule 8). In the list of concurrent powers of federal, provincial and local level, DRM is put as one of the subjects (Schedule 9) – implying that DRM is a shared responsibility of every layer of governance system, but more so at the lower level.

Article 51 stipulates the policies to be pursued by the state. The sub-article G that relates to “policies relating to protection, promotion and use of natural resources,” mentions that the state shall formulate policies on development of sustainable and reliable irrigation by controlling water-induced disasters and expediting river management. Article 51(G) (9) of the Constitution states that the State shall pursue policies relating to, among several other issues, protection, promotion and use of natural resources. Sub-article 51(G) (9) also allows Government to make policies related to “advance warning, preparedness, rescue, relief and rehabilitation in order to mitigate risks from natural disasters.” The Constitution in Article 267 says, 'the Government of Nepal may also mobilize the Nepal Army in, among other things, the disaster management works, as provided for in the Federal law.’ Article 273 of the Constitution gives the President several emergency powers. Article 273 (2) says, “if there arises a grave emergency in a State because of a natural calamity or epidemic, the concerned state government may request the Government of Nepal to declare a state of emergency in respect of the whole of the State or of any specified part thereof.”

#### *4.1.11 Enactment of Disaster Risk Reduction and Management Act, 2017*

It was felt since the early 90s that Nepal needs a proactive disaster management Act and policy to cover the whole gambit of disaster management. Then, the Disaster Management Bill and Policy were drafted in 2007 after nationwide consultation. Subsequently, long discussions and homework among the government and nongovernment DRR stakeholders was carried out from time to time. The Constituent Assembly Members and Parliament Members also were informed and consulted about the need and importance of the DM Policy and Act. Finally, last year, Disaster Risk Reduction and

Management Act (DRRMA), 2017 has been endorsed by the Parliament. The Act has made the provision of a National Council for Disaster Risks Reduction and Management (NCDRRM) upon the Chairmanship of the Prime Minister. Now, the government is in the process of establishing a National Risks Reduction and Management Authority (NRRMA) under the Ministry of Home Affairs. The Authority shall work under direct oversight and control of the Executive Committee (EC). The EC shall be chaired by the Home Minister. The NRRMA will look after all phases of disaster management in close cooperation and coordination with all DRR stakeholders as and when necessary. Currently, the government is going to finalize the Disaster Risk Reduction and Management Regulations (DRRMR) to back up the Act. All these activities and output can be considered as exemplary steps taken by the government of Nepal to show its seriousness towards disaster risk reduction in Nepal.

#### *4.1.12 Endorsement of Disaster Risk Reduction National Policy 2018 and Disaster Risk Reduction National Strategic Action Plan (2018-2030)*

The first meeting of National Council for Disaster Risks Reduction and Management (NCDRRM) was held on 18 June 2018 upon the Chairmanship of the Prime Minister. The meeting endorsed the long awaited Disaster Risk Reduction National Policy 2018 and Disaster Risk Reduction National Strategic Action Plan (2018-2030). The National Strategic Action Plan is in line with the Sendai Framework for Disaster Risk Reduction.

**In a nut shell, the DRR & Mgt. Act 2017, DRR National Policy and the Disaster Risk Reduction National Strategic Action Plan (2018-2030) envision to move from Policy/Commitment to Action and Reactive to Proactive approach. The main thrust of the new legislations is to move forward from managing “disasters” to managing “risks.” These steps are major departure from “reactive” to “proactive” approach.**

#### *4.1.13 Local Government Operation (LGO) Act, 2017*

The Local Government Operation Act, 2017 outlines the roles and responsibilities of Urban and Rural Municipalities, District Councils/District Coordination Committees, and Provincial Coordination Councils. This Act entrusts the local level units with the responsibilities of formulating their own laws, by-laws, regulations; levying taxes; and raising funds, in addition to the judiciary responsibilities. This new Act replaces the Local Self Governance Act, 1999 that helped institutionalize the concept of local-self-governance under decentralization framework and empowered the local bodies for sustainable development.

#### *4.1.14 National Strategy for Disaster Risk Management in Nepal (NSDRM) 2009*

The National Strategy for Disaster Risk Management (NSDRM) 2009 was developed in line with the HFA in consultation with the relevant stakeholders across all levels. The Hyogo Framework for Action 2005-2015 (HFA) was made not only because it recommends what every country should do for disaster reduction, but also because Government of Nepal had taken part in developing this framework and had made commitments to implement it. Hence, streamlining the National Strategy in line with the HFA was regarded as the most important approach to be adopted. The strategy was based on the ground realities and identified needs of Nepal. It tried to capture the opportunities of Disaster Risk Management (DRM) in Nepal in line with the international understanding, scientific progress and regional initiatives. Now, NSDRM has been replaced by Disaster Risk Reduction National Strategic Action Plan (2018-2030).

#### *4.1.15 National Building Code (NBC)*

The government of Nepal formulated and implemented National Building Code (NBC) in 1993. The Building Act, Building Regulations and the Building Code outline the building construction legal

obligations to be followed by the builders or owners through the local government. The Gorkha earthquake 2015 underlined further the importance of the code and is now being implemented throughout the country. The code is also under review and revision process incorporating the learning from the Gorkha earthquake.

#### *4.1.16 National Disaster Response Framework (NDRF)*

The National Disaster Response Framework (NDRF) has been prepared for the effective coordination and implementation of disaster preparedness and response activities by developing a National Disaster Response Plan that clarifies the role and responsibilities of the government and non-government agencies involved in disaster risk management in Nepal. The main purpose of this framework is to develop a clear, concise and comprehensive national disaster response framework for Nepal that can guide a more effective and coordinated national response in case of a large scale disaster. The national disaster response plan includes actions to be taken before, during and after the disasters.

#### *4.1.17 National Adaptation Programme of Action (NAPA)*

The National Adaptation Programme of Action (NAPA) represents the country's notable effort to assess and prioritize immediate and urgent needs to address climate change risks through a broad consultative process. According to NAPA, the effects of climate change have been observed, while some parts of Nepal show increasing erratic and intense rains, and such climatic trends combined with fragile topography, deforestation and eroded soils are leading to landslides and flash flood hazards. It has also been projected that rainfall intensity will increase across many areas of Nepal due to climate change and, therefore, vulnerable communities will have to increase their adaptive capacity to cope with climatic hazards.

#### *4.1.18 Framework for Local Adaptation Plan of Action (LAPA)*

The Local Adaptation Plan for Action (LAPA) provides guidelines for the disbursement of at least 80 per cent of adaptation funds on the implementation at the local level. To support implementation, the Government of Nepal has developed a national framework for LAPA, which aims to make adaptation planning a bottom-up, inclusive, responsive and flexible processes that will identify the most climate vulnerable people and allow them to make informed decisions on priority adaptation actions. It provides an opportunity for undertaking developmental activities that are climate resilient with strong co-benefits for poverty reduction. The integration of local level Climate and Energy Plans with the LAPA could facilitate some triple-wins and produce low carbon climate resilient development.

#### *4.1.19 Local Disaster Risk Management Planning(LDRMP )Guidelines, 2011*

Keeping in view the need to develop disaster risk management from the central to local level and mainstream it with development plan, policy and programmes at all levels, and also in order to ensure the notion of sustainable development, the "Local Disaster Risk Management Planning Guideline, 2011" has been approved and put into effect. The major goals of the guidelines are to make disaster management participatory, transparent, accountable, inclusive and responsible by optimally mobilizing local resources and capabilities, and by ascertaining the access and ownership of all affected communities and people.

#### *4.1.20 Disaster Preparedness and Response Plan (DPRP)*

The national workshop on DRR in 2010 recommended 21 points which was approved by the Central Natural Disaster Relief Committee (CNDRC) for an effective disaster preparedness initiative at district, regional and national levels. One of the recommendations was to create District Lead Support Agencies (DLSA) in 75 districts among the national and international agencies to support District Disaster Relief Committee for preparing District Disaster Preparedness and Response Plan. It resulted into very positive feedbacks from all the DRR actors. As a result, so far, almost all districts have the DPRP.

#### *4.1.21 Dead Body Management Guidelines (DBMG)*

The Government of Nepal has formulated and implemented Dead Body Management Guidelines with the objectives to be considerate of the dignity of the dead; be considerate towards the religion, culture and customs; be respectful of the bereaved; be realistic about logistical and human resource constraints; and ensure the identification of the dead.

#### *4.1.22 Nepal Risk Reduction Consortium (NRRC)*

In 2009, the NRRC<sup>2</sup> was created to bring together lead actors from the government, major donors, UN agencies, the Red Cross, INGOs and NGOs to reduce Nepal's vulnerability to disasters through the 5 flagship areas (School and hospital safety; Emergency preparedness and response capacity; Flood management in the Koshi River basin; Integrated community-based risk reduction; and Policy/institutional support for disaster risk management) for sustainable disaster risk management. The 5 flagship areas were in line with the HFA 5 priority areas. For each area, the lead role was assigned to a government

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<sup>2</sup><http://un.org.np/coordinationmechanism/nrrc>. NRRC started in 2009. Nine characteristics have been defined to describe the essential components for resilient communities along with indicators for monitoring progress

ministry while an international agency was designated as coordinator to support the concerned government lead.

#### *4.1.23 National Emergency Operation Centre (NEOC)*

The National Emergency Operations Centre (NEOC) started on the 17 December 2010 under the Ministry of Home Affairs. The objectives of the NEOC are to work as a coordination and communication point for disaster information across the country, including government agencies and other response and recovery stakeholders such as Nepal Red Cross Society, UN agencies, INGOS and NGOs. Likewise, Ministry of Health has established the Health Emergency Operation Centre, which is well connected with the NEOC, MoHA. As part of MoHA's strategy to further develop Nepal's emergency preparedness and response capacity, it is planning to establish district emergency operation centres (DEOCs) in all 77 districts of Nepal in three phases.

#### *4.1.24 National Platform for DRR (NPDRR)*

National Platform for DRR in Nepal was established in 2009. National Platform for Disaster Risk Reduction is a national mechanism for coordination and policy guidance on disaster risk reduction that is multi-sectoral and inter-disciplinary in nature, which includes representatives from all stakeholders involved, such as government, international organizations, NGOs, academic institutions, private sector and the media. All NGOs, INGOS, UN agencies, media and private sector of Nepal that are working in the field of DRR are the member in this Platform.

#### *4.1.25 National Reconstruction Authority (NRA)*

National Reconstruction Authority (NRA) was established in 25 December 2015 for five years to lead and manage the reconstruction and recovery of the earthquake. The overall goal of NRA is to promptly complete the reconstruction works damaged by

the earthquake, and to promote national Build Back Better (BBB) interest. NRA has formulated a Post Disaster Recovery Framework (PDRF) (2016-2020) on the basis of Post Disaster Need Assessment (PDNA) report. The government has allocated adequate budget for reconstruction and recovery activities. Similarly, almost all of the affected families have received the first instalment of the grant and recovery activities have been further expedited. So far, National Reconstruction Authority (NRA) has reconstructed 160, 978 individual houses, 220 government buildings, 3636 school buildings, 106 cultural and heritage sites, 643 health facilities, 79 security forces facilities and 581 water supply schemes.

#### *4.1.26 Additional Initiatives*

1. Since the year 2000, Government has been initiating different process to mainstream DRR and CCA into development plan at all levels. Recently, National Planning Commission has developed a guideline to mainstream DRR and CCA into development plan at national and sectoral levels. Several development partners in close coordination with the government have been implementing child centred DRR, capacity building of physically challenged persons in relation to DRM, gender sensitive/ inclusive CBDRM and crop and livestock insurances (risk transfer) at different disaster prone areas of the country.
2. Almost all districts have now developed District Disaster Preparedness and Response Plans. Department of Water Induced Disaster Management (DWIDM), Department of Hydrology and Meteorology (DHM), Department of Mines and Geology (DMG), Department of Soil Conservation and Watershed Management (DSCWM) have prepared different types of hazard maps in various districts of the country.

3. The Department of Mines and Geology (DMG) established 21 micro-seismic stations to record the magnitude of the earthquake in Nepal. Optimum Seismic Monitoring System is also established in the National Seismological Centre (NSC) which is linked with the National Emergency Operation Centre (NEOC).
4. Department of Hydrology and Meteorology have initiated 3 days flood forecasting system. In collaboration with NEOC, Standard Operating Procedures on forecast based flood preparedness have been developed and integrated in DPRP of flood prone districts.
5. Cluster approach has been institutionalized for effective implementation and better coordination in disaster management. There are 11 clusters in operation (search and rescue food security, health, nutrition, water and sanitation, education, protection, emergency shelter, logistics, emergency communication and early recovery). There are also DRR focal points in major DRR related government agencies in order to strengthen cross-sectoral planning and coordination. These focal points work in a harmonized manner to ensure that disaster and climate change risk reduction is mainstreamed within respective agencies. The Government is underway to operate medium and light Search and Rescue (SAR) teams. Besides, Get Airport Ready (GAR) is another significant work that Nepal has initiated. Establishment of the Humanitarian Staging Area is one of the major activities under GAR initiative in Nepal. The establishment of the disaster preparedness networking was another milestone to foster coordination among disaster management related government and non-government agencies and serve as a bridge between them.
6. Similarly, Government has given priority to streamline DRR into development planning process. In addition, community based disaster management activities in different disaster prone communities have been initiated and have proved to be

instrumental for raising awareness and revitalizing self-help spirit at community level.

7. After the year 2000 -- Nepalese Universities initiated to incorporate the new courses in multidisciplinary fields in higher level studies, several universities of Nepal started contemporary researches in the emerging issues of disaster risk management and climate change. Realizing the fact that Nepal is one of the most disaster vulnerable countries in the world, basic vision and objectives are to enhance the disaster resilience of Nepali community at large through creation and dissemination of knowledge and production of appropriate human resource on Disaster Risk Reduction in Nepal. Technological innovations and human resource development have been improved to increase the resilience of community at large. The universities have also been supporting innovation by generating new knowledge, accessing global stores of knowledge, and adapting knowledge to local use in the field of DRR and Climate Change. Different universities in DRR have a formal course in higher level such-as M.sc in Disaster Risk Management, climate change adaptation and an earthquake engineering course in (IOE) Tribhuvan University and Purwanchal University. Lumbini Buddha university's geology department and humanities department of TU has also initiated in Master level programs in the 'Disaster Management' as well as in 'Crisis management'. In similar ways there are several individual and joint researches done in collaboration with other international universities and the ones in Nepal. Universities have realized the importance of research in hazards and the appropriate mitigation for different hazards as well as application of DRR techniques.
8. Similarly, the Government has incorporated disaster management subjects in school curricula since the mid-1990s. The Government has retrofitted more than 300 schools and is

planning to retrofit other vulnerable schools. Now, majority of the schools have the school safety programs and School Disaster Management Plan in place. Furthermore, hospital preparedness programs are also being implemented by the Government of Nepal in public and private sectors. The Government has incorporated comprehensive School Safety Framework (CSSF) in School Sector Development Plan (SSDP) – 2017-2023.

9. Eighty-three open spaces have been identified within Kathmandu Valley for shelter in the event of major disasters and in few open spaces infrastructure development is ongoing. Efforts are being made to ensure supply of safe drinking water, emergency kits, and shelter with warehouse capacity.
10. Implementation of National Building Code (NBC) has been made mandatory in all municipalities. Likewise, mason trainings on safe building construction practices as per the NBC are being organized by both government and no-government organizations.
11. The establishment and institutionalization of an authentic and open DRM System, GIS based Disaster Information Management System (DIMS) have been initiated. The DRR portal has been operational for collection, analysis and dissemination of information.
12. Government is also in the process to establish regional warehouses in each province of the country. Such province level warehouses will also be linked with EOC at different levels. Likewise, with the technical support of development partners, EWS have been established in few major river systems and linked with both the EOCs and communities. Such few established “end to end” EWS have proved to be very useful to save lives and properties in flood prone districts of the country. Government is in the process to strengthen the EWS in all flood prone districts of the country.

## **5. Gaps in Policy, Program and Practice**

Since the new constitution was declared in September 2015, Nepal is passing through a transition of state restructuring from a unitary centralized system of governance to a federal decentralized one in which promulgation of new legislations form the core priorities of the government. With the completion of three levels of elections (local, province and federal) and a majority government in place, it is anticipated that several activities in line with DRR & M Act 2017, strategic action plan (2018-2030) SFDRR and regional commitments will be successfully implemented in the days/ years to come. In this context, the major challenges that Nepal faces in the field of DRM are as following:

1. Various studies and reports over the last three decades have shown that each year, floods, landslides, fires, avalanches and epidemics kill hundreds of people and destroy property worth billions of Rupees. They also have a negative impact on the nation's development activities. In addition, due to the fragile geo-physical situation of the country and response centric approach, the losses and damages from disasters are increasing. So far, more emphasis has been given towards the disaster response and relief rather than complete approaches including planning, preparedness and recovery.
2. Despite of some good practices and Disaster Risk Reduction (DRR) initiatives, the frequency and intensity of disasters are in increasing trend. Also, because of the fatalistic nature of some people and the inadequate preparedness -- vulnerability to disasters is on the rise with grave consequences for the survival, dignity and livelihood of individuals, particularly the poor and the extremely vulnerable groups. The risk is compounded by changing demographics, technological and socio-economic conditions, development within high-risk zones, environmental degradation, climate change, competition for scarce resources, disability and the impact of epidemics.
3. In spite of growing understanding and acceptance of the importance of inclusive DRM, the vulnerable people are not fully aware of the

causes and consequences of hazards; on the other hand, they have limited access on the information.

4. Though mainstreaming DRR into development planning has been initiated recently, it has yet to be adequately incorporated into development plans and programs. There are two aspect of disaster mainstreaming, one is integrating DRR in all sectoral development plans and another is mainstreaming in district and local development plan. Linkages between DRR, poverty, migration, livelihood and internal displacement has not been established which may negatively affect to achieve the goals of Sustainable Development Goals (SDGs), Poverty Reduction Strategy Papers (PRSP) and Sendai Framework for Disaster Risk Reduction (SFDRR).
5. As evident by Gorkha Earthquake of 2015, Nepal's capability to respond to mega disaster is highly constrained by the lack of high-tech equipment and capacities to run effective SAR. Also it lacks capacities in mobilizing international humanitarian support at the real time of emergencies.
6. Nepal needs to raise its technical and functional capacities to fully utilize available expertise, experiences, research, and human resources available within and outside the region. Nepal can benefit from cross learning between the countries in the area of early warning, raising technical skills, DIMS and information sharing, GIS based multi-hazard risk assessment and developing capacities for risk informed planning.
7. Nepal's disaster information system needs serious improvements. Disaster information so far remains scattered, scanty and not fully synchronized to a national system, which constrain making timely analysis of loss and damage, and building scenarios for future impacts that could have helped in better planning for preparedness, response, risk reduction and ultimately resilience enhancement.
8. Large scale capacity building in the field of DRM and early warning system at all levels of government (local, province and federal) is a pre-requisite for making Nepal a disaster resilient nation.

## 6. Way Forward

Despite of several challenges faced by the country, Nepal is striving hard to reduce disaster risk and improve its response mechanism. Based on the progress made over the years since the commencement of the IDNDR and HFA, and lessons learnt from past efforts of responding to disasters, Nepal enacted the forward looking DRR & M Act (2017) and the Policy and Strategic Action Plan (2018-2030). Based on the national priority and global and regional commitments, following activities are the way forward to make Nepal a disaster resilient nation:

1. Government is committed to successful implementation of the NDRRM Act (2017), Disaster Risk Reduction National Policy, and National Disaster Risk Reduction Strategic Action Plan (2018 – 2030), and the global (SFDRR and SDGs) and regional (AMCDRR) commitments.
2. Risk informed approach of development planning will be pursued at all levels and across the sectors to integrate principles and practice of DRR and CCA into planning and budgeting followed by regular monitoring and evaluations.
3. With a priority to engage whole of the government into risk reduction agenda and learning from experiences of other countries, a new institutional set up for disaster risk management from national to sub-national levels in line with new federal system of governance is on-going.
4. To achieve the goal of resilient Nepal, emphasis will be given on fostering partnership with non-state actors, private sector and international agencies for effective disaster risk reduction and response and promote “culture of safety” at all levels and across the society.
5. On the basis of the learning from 2015 Gorkha Earthquake and floods of 2017, Disaster response preparedness and response activities will be strengthened at all levels through provisions of adequate logistics, capacities, guidelines and SOP, and establishment of medium and light SAR teams.

6. A network of emergency operation centre and early warning system will be developed and further strengthened to support emergency response planning and coordination of humanitarian actions linked to recovery work that directly result into saving lives and building livelihoods.
7. A national level disaster management information system (DMIS) will be established by the government to produce authentic statistics on disaster loss and damage, analysis and trend, and report on anticipated disaster in order to guide priority setting for disaster management planning at national and sub-national levels and support in decision making.
8. Government will initiate a massive program on community based disaster management activities in all disaster prone areas (both urban and rural) of the county based on the experiences from 2015 earthquakes and ensure developing a mechanism to mobilize youth, volunteers and self-help groups in a massive scale at the time of disasters.
9. Government is committed to develop a mechanism for cross-learning between countries about knowledge, research and experience relevant to disaster risk management and creating platforms for disaster information sharing between Nepal and neighbouring countries.
10. Government is finalizing minimum school safety package and also developing its dissemination plan.
11. The long awaited new Disaster Management System which will be handled by the **National Disaster Management Authority (NDMA)** will commensurate with the following components:
  - ✓ ***A standardized approach to disaster management that is scalable and flexible;***
  - ✓ ***Well-organized cooperation and interoperability among responders;***
  - ✓ ***Inclusive multi-hazards preparedness at all levels;***
  - ✓ ***Efficient resource coordination among the stakeholders and authorities;***
  - ✓ ***Integration of best practices and lessons learned for continuous improvement.***

## 7. Final Note

It has been realized that less attention was given towards disaster risk reduction in the past. Capacities of the national authorities to implement effective DRR programs remained insufficient being mostly response/relief oriented, with mechanisms still inadequate for sound preparedness, mitigation and prevention. Insufficient and poor implementation of legal instruments has also been identified as a factor for losses and damages.

Keeping in view the current disaster trends in Nepal, recognition of the importance of reducing disaster risk and building resilience with a goal against which efforts could be measured must be a major contribution to meeting the challenges to be faced with sustainable development. More importantly, in order to mainstream DRR into development planning, the government and research institutions should encourage the DRR specialists. It has also been realized to restructure and rethink on the existing DRR modality of the government as well as non-government sectors. Moreover, closer integration of DRR and poverty reduction needs to be the part and parcel of the wider goal of mainstreaming DRR into development.

**Following are the Key Focus Areas (KFA) now onwards the Government of Nepal will take into account for a resilient Nepal:**

1. Focus towards cost effective DRR;
2. Build aware, prepared and empowered community;
3. Form trained, equipped and connected Federal, Provincial and Local disaster response force;
4. Enhance cooperation and collaboration among DRR stakeholders;
5. Adopt sustainable development by recognizing the interrelationship between disaster and development;
6. Learn lessons from huge disasters such as: 2015 Gorkha Earthquake and Build Back Better;
7. Maintain DRR momentum after the immediate disaster response;

8. Promote sex-age-disability disintegrated database and emphasize on knowledge sharing on disability at all levels and mainstream inclusive disaster risk reduction framework and plans with a motto of “Disaster Resilience for all Ensuring Equality and Inclusion;”
9. Increase investment in local action and local actors ahead of disasters and crises, to build resilience and anticipate shocks which will help protect the lives, livelihoods and dignity of the most-at risk groups and community including rolling out of national protection cluster strategy;
10. Ensure youth engagement by investing in developing youth leadership on disaster risk reduction and foster an enabling environment to facilitate youth-led initiatives to build resilient communities;
11. Enhance Public and Private partnership;
12. Introduce space technology/earth observation for disaster data, information and effective response. The nation will emphasize more on research and budget allocation in universities, and focus on involving more Nepali researchers in this sector;
13. Information, Knowledge and education with better institutional linkages will be the key to reduce the impacts and to enhance the livelihoods and to make the community disaster resilient.
14. Support provincial and local government in fulfilling their legal mandate in disaster risk reduction and management in building capacity dealing with localize and mid-scale disasters.

Traditionally, disasters were addressed mainly from a humanitarian perspective and gave priority to immediate rescue and relief works. ***Now, it is highly necessary to take preparedness actions and build a culture of resilience -- so that more lives and properties may be saved in the days to come.*** It is felt that improving and strengthening capacity in mitigation, preparedness, response, recovery, rehabilitation and reconstruction in collaboration with local, national, regional and international organizations is the better way to reduce disaster vulnerability.

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2015 Earthquake touched off an avalanche at Mount Everest Base Camp

Prepared by:  
The Government of Nepal, Ministry of Home Affairs in close collaboration  
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