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Disaster Management System in Nepal

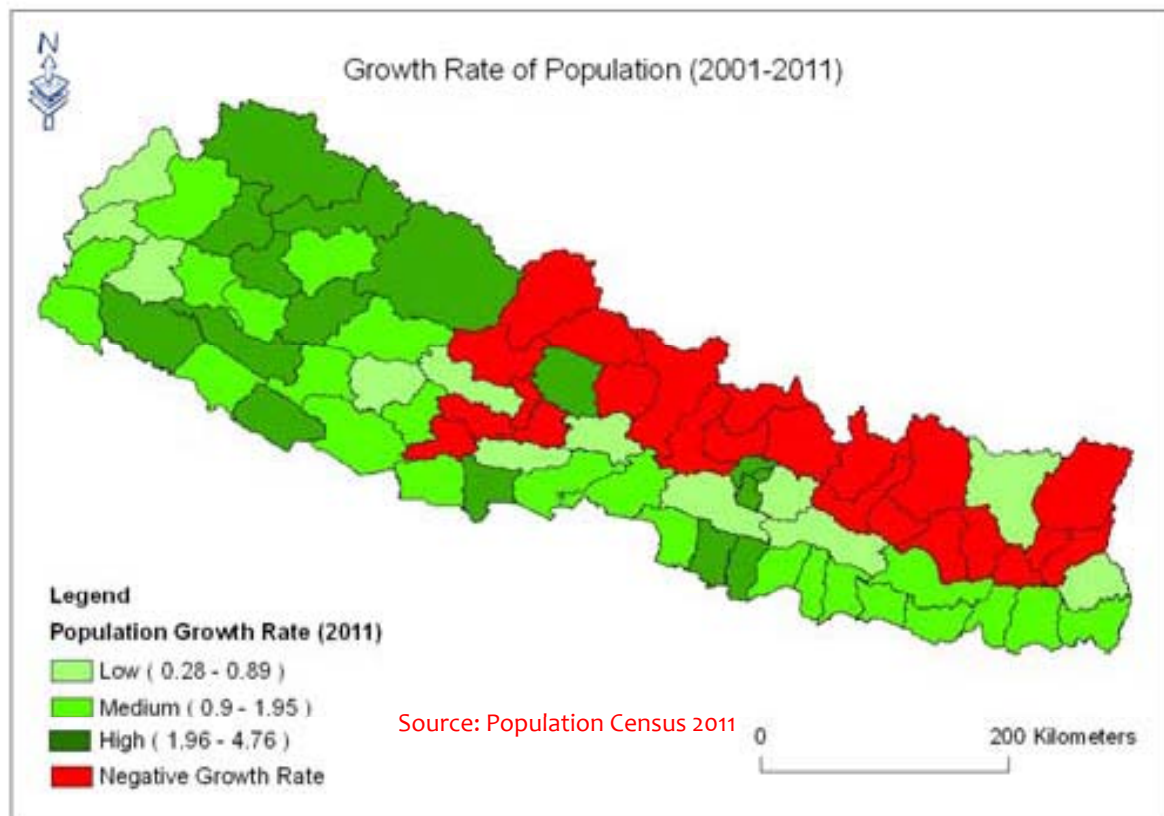
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Ministry of Home Affairs, Nepal
2012/2/17



Presentation Outline

1. General information of Nepal
2. Disaster Profile and scenario of Nepal
3. Disaster Management System of Nepal
4. Progress of the implementation of HFA
5. Recent Major projects on DRR
6. ADRC counterpart

1. General information of Nepal



1.1 Political history of Nepal

- ☀ Before 1768- 50 small feudal States
- ☀ In 1768 Prithvi Narayan Shah conquered the feudal state and built greater Nepal and established Shah Dynasty (1768-2008)

▣ 1768-1990- Absolute Monarchy

- 1768-1846 King in power
- 1847-1950 Rana Aristocracy
- 1951-1960 So called democracy
- 1961-1990 Partyless Panchayat system

▣ 1990-2008 Constitutional monarchy and multiparty democracy

2008 May 28- End of Shah Dynasty and declare federal democratic republic state



1.2 Present political system of Nepal

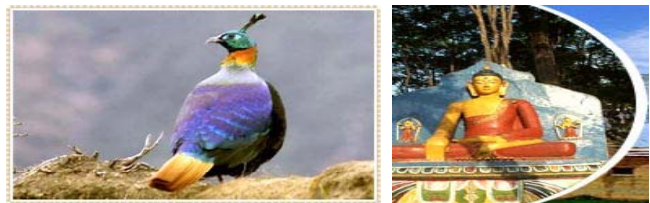
Nepal is in her political transition

- Peace process is underway as per the comprehensive peace accord between CPN Maoist and GON on 21 November 2006
- Interim Constitution of Nepal was promulgated on 15 January 2007 and has been amended for 11th times by 24 Nov 2011
- Constitutional Assembly was formulated on 2008 for its two year tenure but has been extended for 4 times up to 2012 May
- On 28 May, 2008 Nepal declared as a **Federal Democratic Republic state**
- New Constitution making process is going on by constitutional Assembly

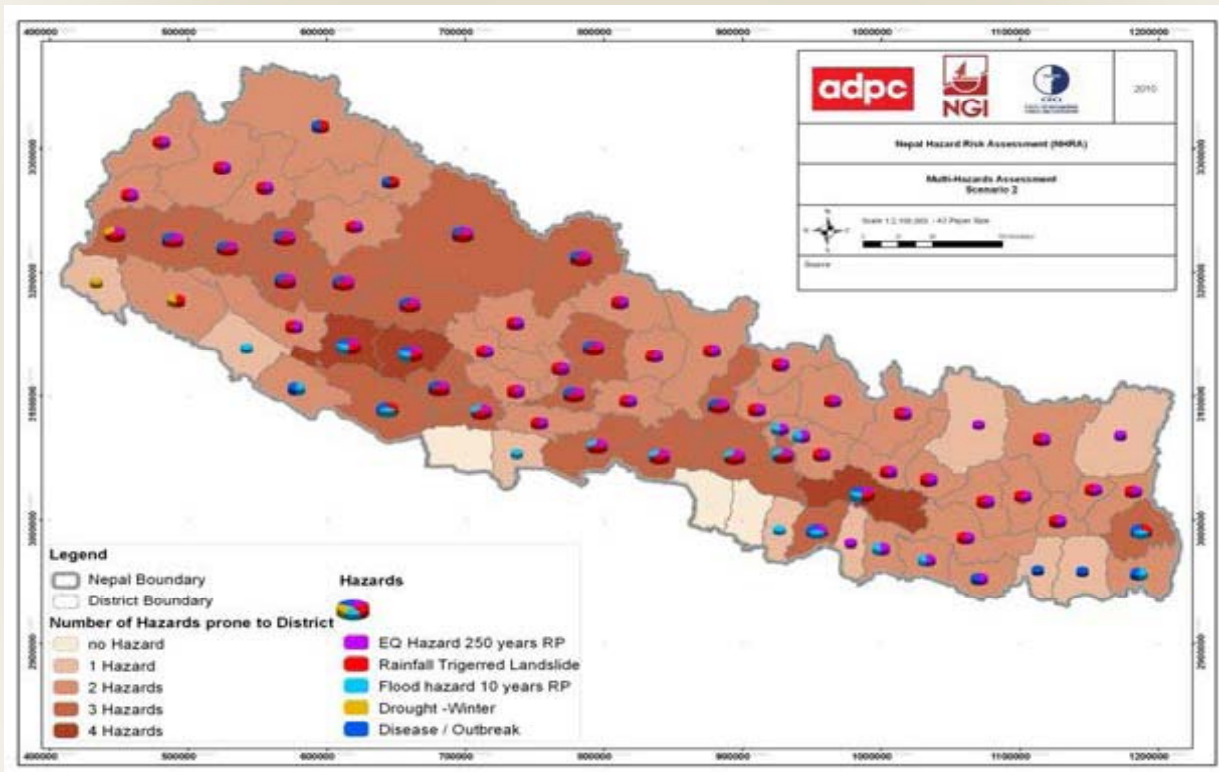


1.3 Nepal at a Glance

- ✓ **Area**- 147,181 sq Km
- ✓ **Elevation**- 70 m to 8848m high
- ✓ **Demography**-26.6 Millions population, 1.4% growth rate, 181 per sq km density, 102 ethnicities, 92 languages, 6 religions (Population census 2011)
- ✓ **Administrative division**- 5 Regions, 14 Zones, 75 Districts, 3913 VDCs and 58 Municipalities
- ✓ **Socio-economic**- 64.1 year life expectancy, 86.5 percent literacy rate (15-24), 25.2 percent poverty, 3.3 percent GDP growth, 13 percent inflation, HDI 0.458, GNI per capita US\$ 472 (Nepal MDG Report, 2010)



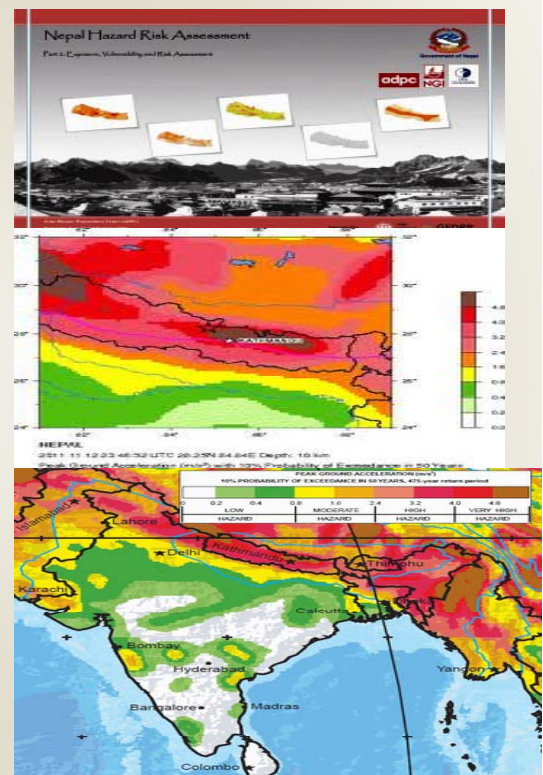
2. Disaster profile and scenario of Nepal



2.1 Disaster Profile of Nepal

- ◆ 20th topmost disaster prone country in the world
- ◆ 11th rank in earthquake vulnerability
- ◆ 30th rank in flood vulnerability
- ◆ 4th rank in climate change vulnerability
- ◆ Kathmandu Valley is exposed to the greatest earthquake risk city among 21 megacities in the world

Source: Ministry of Home Affairs and Nepal Disaster Report 2009



2.2 Major disasters in Nepal

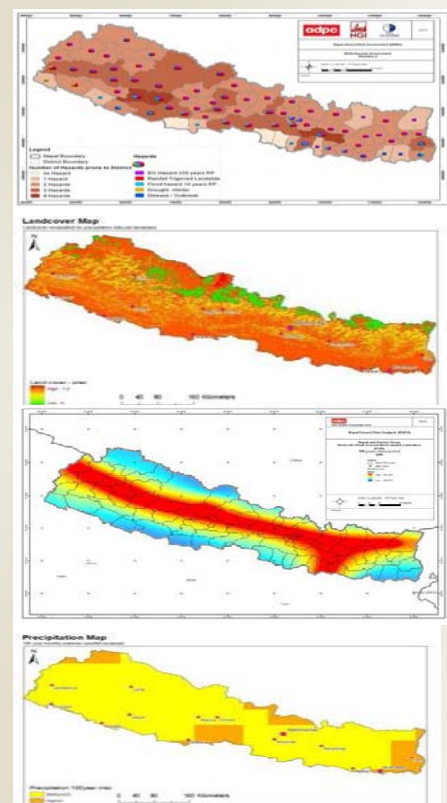
- ❑ Flood
- ❑ Avalanches
- ❑ Landslide
- ❑ Epidemics
- ❑ Earthquake
- ❑ Drought
- ❑ Fire
- ❑ Hailstone
- ❑ Windstorm
- ❑ Thunderbolt
- ❑ Cloudburst
- ❑ GLOF



2.3 Districts Hazard profile

- ☀ According to Nepal Hazard Risk Assessment Report 2010 which cover earthquake, landslide, drought, epidemics and flood hazard in the study:
- ☀ Out of 75 districts of Nepal
- ◆ 38 districts are prone to **three** types of geological and hydro- meteorological hazard
- ◆ 13 districts are prone to **four** types of geological and hydro- meteorological hazard
- ◆ 3 districts (Sindhuli, salyan and Rolpa) are prone to **five** types of geological and hydro- meteorological hazard

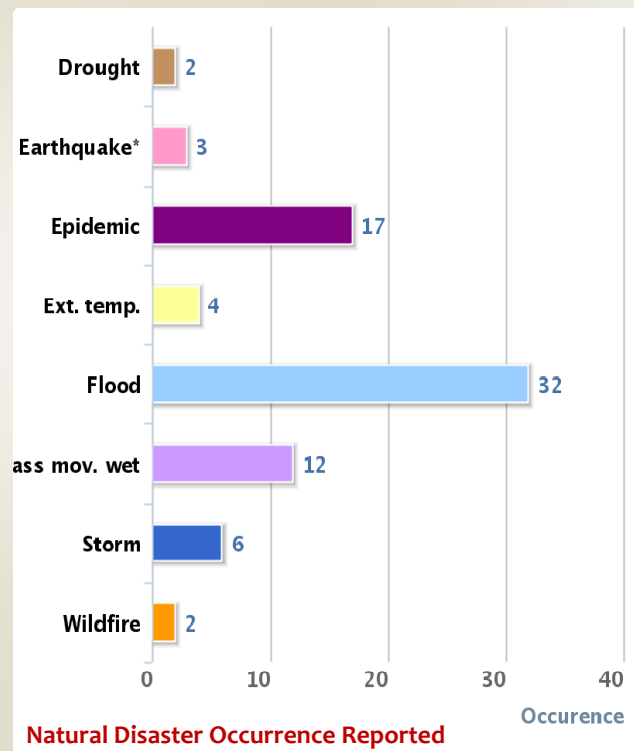
Source: Nepal Hazard Risk assessment Report,2011



2.4 An Overview of Natural Disasters in Nepal from 1980 - 2010

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

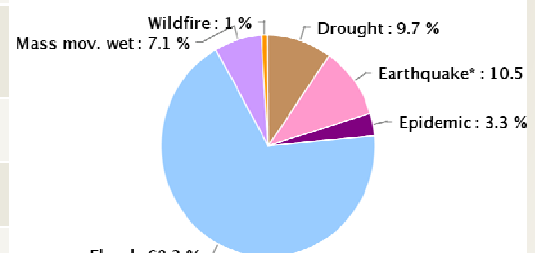
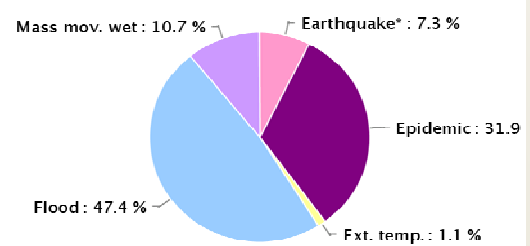
([Source- Prevention web](#))



2.5 Top 10 Disasters of Nepal

S.N	Disaster Type	Disaster Year	Killed people
1	Epidemic	1991	1334
2	Flood	1993	1048
3	Flood	1996	768
4	Earthquake	1988	709
5	Flood	1981	650
6	Epidemic	1992	640
7	Mass Movement	2002	472
8	Epidemic	2009	314
9	Flood	1998	260
10	Epidemic	2000	250

Source: Prevention Web



Percentage of reported people affected by disaster type (1980-2010)

2.6 loss of lives from previous disasters

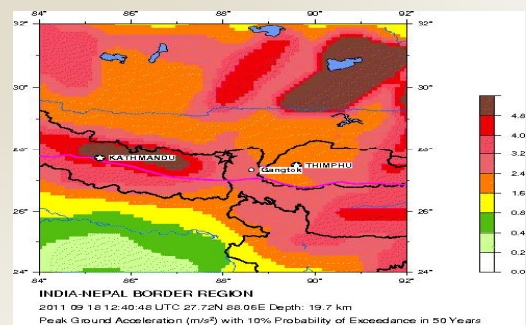
Year	Flood and Landslide	Earthquake	Thunderbolt	Fire	Hailstone	Windstorm	Epidemic	Avalanches	Total
2000	173	0	23	53	1	2	141	0	393
2001	196	1	39	26	1	1	154	0	418
2002	441	0	3	14	0	3	0	0	461
2003	232	0	42	16	0	20	0	0	310
2004	131	0	10	10	0	0	41	0	192
2005	141	0	18	28	0	0	34	21	242
2006	141	0	17	28	1	0	34	0	221
2007	216	0	35	34	18	1	9	9	322
2008	134	0	14	11	0	2	10	0	171
2009	135	0	7	35	0	0	462	2	641
2010	201	0	39	42	0	2	34	2	320
2011	269	6	95	46	2	6	9	0	433

(Source- Ministry of Home Affairs , NEOC)

2.7 Sikkim Earthquake on 18th September 2011

- ☀ **Epicenter**- Sikkim, North part of India
- ☀ **Magnitude**- 6.9 Mw
- ☀ **Time**- 6.11 PM
- ☀ **Affected districts**- 25(Eastern and Hilly part of Nepal)
- ☀ **Death**- 6 persons
- ☀ **Injured**- 27 Persons
- ☀ **Individual houses damaged**- 2906 fully and 4043 partly destroyed
- ☀ **Public Houses damaged**- 144 fully and 473 partly destroyed

Source: Ministry of Home Affairs, NEOC



2.8 Government Response to the Sikkim Earthquake

- Disaster Response command post was established at National Emergency Operation Centre (NEOC) on the leadership of Joint Secretary MoHA and coordinate the rescue and relief operation immediate after earthquake
- Immediate rescue operation was done aftermath of the earthquake by mobilizing Nepal Police, Nepal Army, Armed police Force and Nepal Red cross Volunteer under the command of DDRRC
- Central Natural Disaster Relief Committee (CNDRC) meeting was held on 19th September at 9.am and made a important decision for disaster response
- Free treatment was provided for injured person
- 125,000 NPR was provided for family member of the each earthquake victim
- 5000-25000 NPR was provided as a immediate relief for the family whose house were destroyed by earthquake
- Emergency shelter kids and emergency foods were provided for displaced family
- Temporary classes were built to continue the school education
- Reconstruction program is undergone

3. Disaster Management System of Nepal

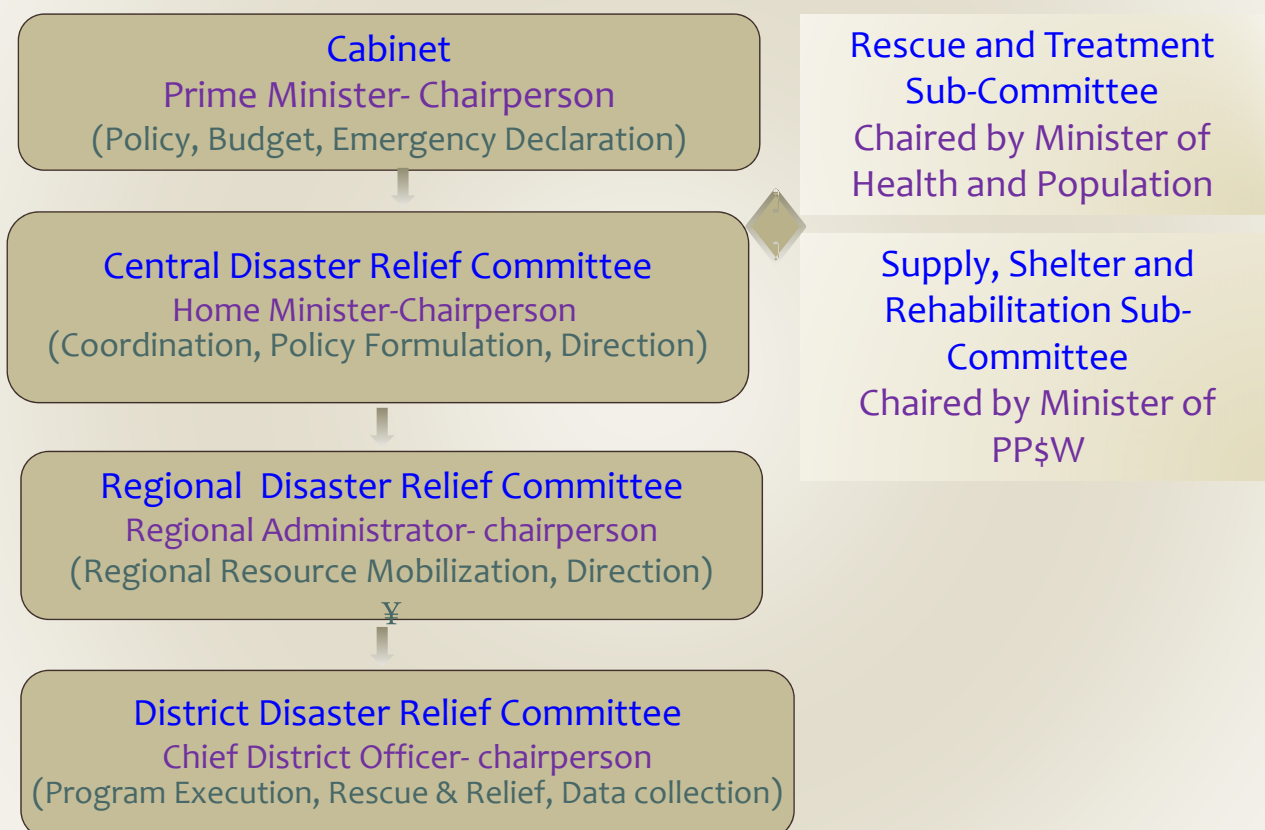


Ministry of Home Affairs: A Nodal Agency for Disaster Management in Nepal

3.1 legal System and Framework

- **Natural Calamity Relief Act, 1982** is a major guiding act for Disaster Management in Nepal
- The aim of the act is to arrange relief operations and protect lives and properties during the disasters
- The act covers earthquake, Fire outbreak, Storm, Flood, Landslide, Drought, Famine, Epidemic, Industrial accident and Explosion in the definition of disaster
- The act create Central Natural Disaster Relief Committee (CNDRC), Regional Natural Disaster Relief Committee(RDRC) and District Disaster Relief Committee (DDRC) as a responsible body to look after disaster management function at the central, regional and district level respectively.
- The act also made a provision to establish Natural Disaster Relief Fund to carryout disaster response activities during the emergency
- However, this act is more response centric and does not cover many aspects of disaster risk reduction and recovery. So, there is urgent need to promulgate new comprehensive disaster management act. Government of Nepal is now working on that line.

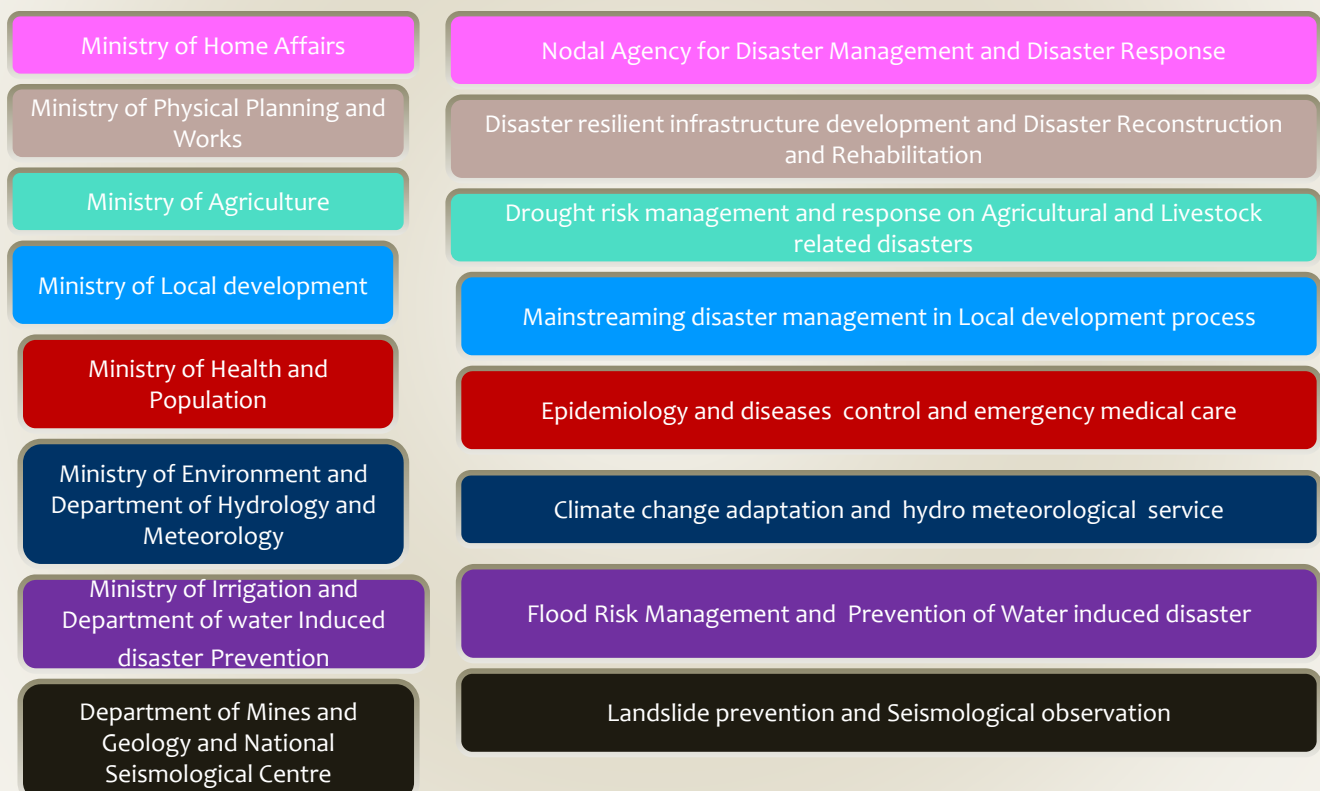
3.2 Institutional Framework for Disaster Management



3.3 Administrative Arrangement in Disaster Management



3.4 Responsible Organizations for Disaster Management in Nepal



3.5 Major policies on Disaster Management

- ❑ National strategy on disaster risk management 2009
- ❑ Periodic Plan 2010-1012
- ❑ Soil and water conservation act, 1982
- ❑ Nepal building act, 2007 and Building Code, 1994
- ❑ Environmental protection act, 1996
- ❑ National agriculture policy, 2004
- ❑ National shelter policy, 1996
- ❑ National urban policy, 2006
- ❑ National water plan, 2005 and Water resource policy, 1993
- ❑ National water resource strategy, 2002
- ❑ Water induced disaster management policy, 2006
- ❑ Strategies related to health sector

3.6 National Strategy for DRM 2009



☀️ 3.6.1 Background ,vision and objective

Background: HFA 2005

☀️ **Vision:** Disaster Resilience Nepal

☀️ **Objectives:**

- Integration of Disaster Risk Reduction (DRR) into sectoral development policies and planning
- Development and strengthening of institutional mechanism and capacities to build resilient communities
- Systematic incorporation of different approaches into Emergency Preparedness, Response and Recovery programmes

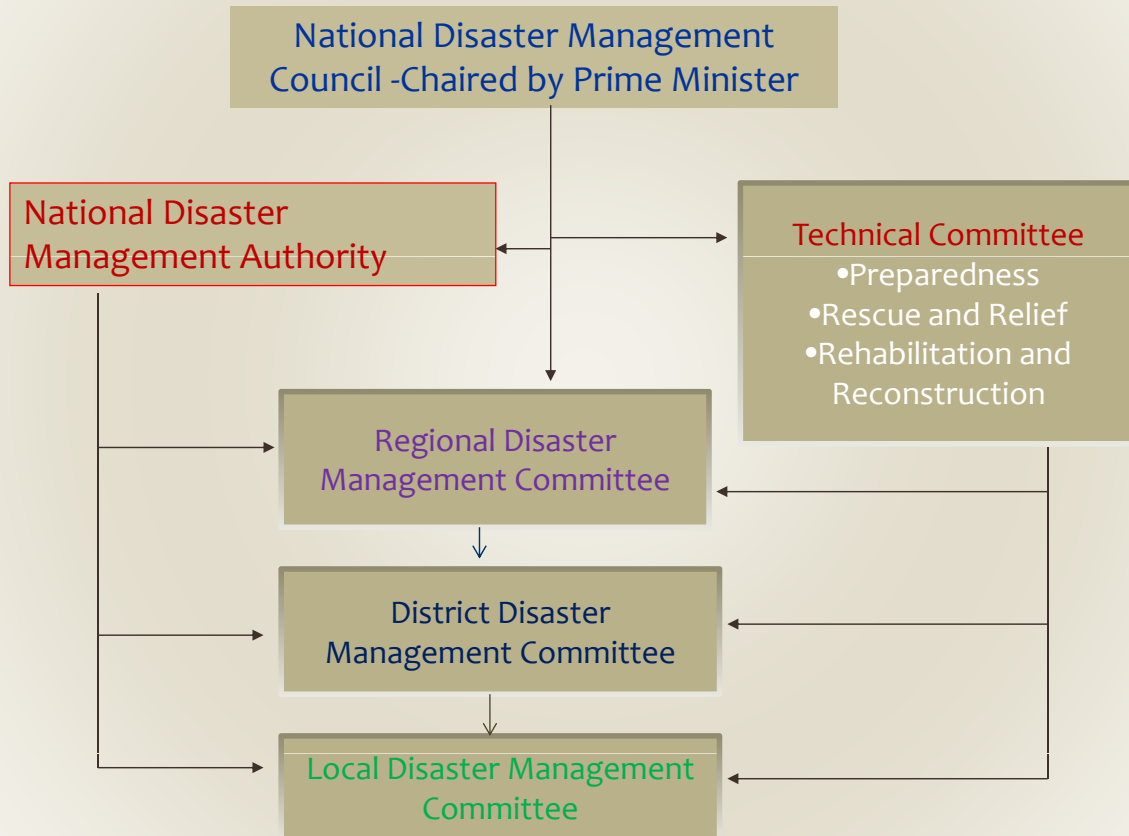
3.6.2 Directive Principles of DRM Planning

- Mainstream DRM into development plans
- Ensure life safety and social security
- Emphasize gender and social inclusion
- Adopt decentralized implementation
- Follow a holistic approach
- Prioritize staff safety and security
- Follow one-window policy and cluster approach
- Work with participation and coordination

3.6.3 Sectoral Strategies for DRR

- Agriculture and Food Security
- Health
- Education
- Shelter, Infrastructure, Physical Planning
- Livelihood Protection
- Water and Sanitation
- Information, Communication, Coordination and Logistics
- Search and Rescue, and Damage and Needs Assessment
- Forest and Soil Conservation

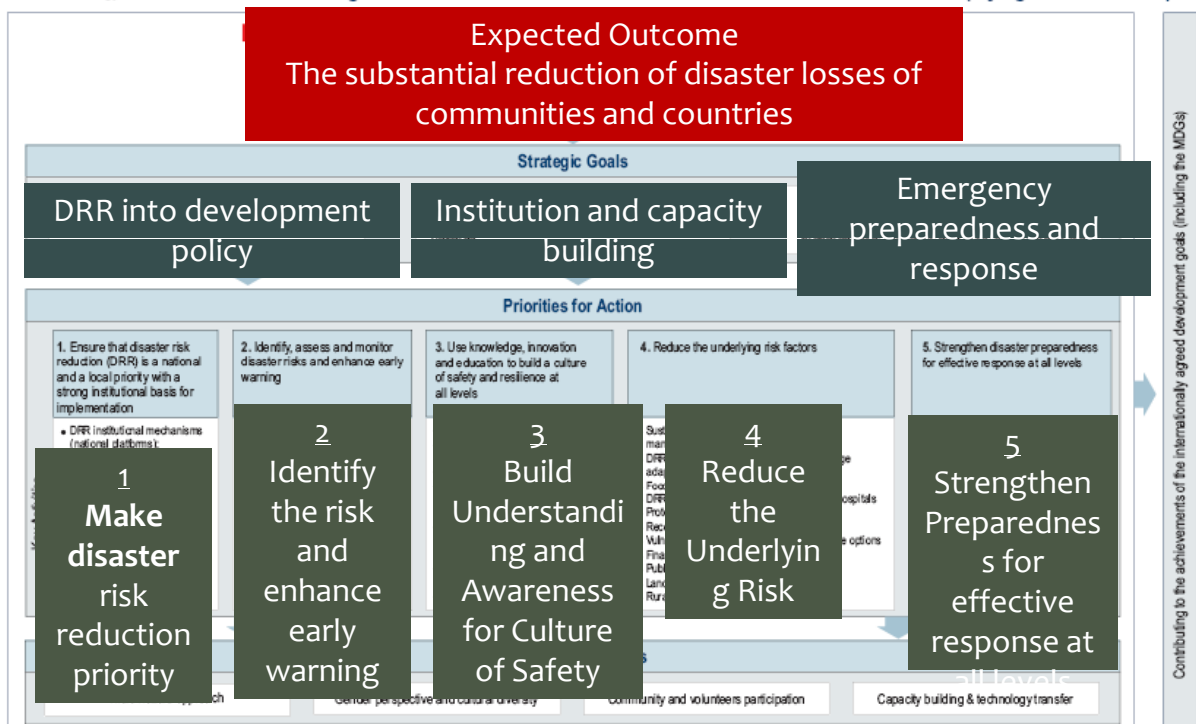
3.6.4 Proposed Institutional Arrangement



4. Progress of the implementation of HFA



SUMMARY of the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (Hyogo Framework)



4.1 Hyogo Framework For Action



Goal 1: DRR into Development Policy

- ◆ 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 accorded priority to pre-disaster preparedness.
- ◆ National Strategy for Disaster Risk Management (NSDRM) 2009 has been adopted
- ◆ Sixty Seven districts have disaster preparedness plans.
- ◆ At local level the 3-year interim plan (2008-2010) has envisaged to enhance the engagements of local bodies and communities in the prevention works.
- ◆ 3 municipalities have started implementing safe building construction practices using the seismic code provisions in the local context.
- ◆ Multi-Hazard Risk Assessment has been done which covers five major hazards.

Goal 2: Institution and Capacity Building

- 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.

Goal 3: Emergency Preparedness and Response

- ❑ Pre-Monsoon planning 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 from 2009.
- ❑ 64 open spaces for evacuation during emergencies have been identified within Kathmandu valley.
- ❑ National Emergency Operation Center (NEOC) has been established at MOHA
- ❑ Hospital Preparedness for Emergencies (HoPE, Medical First Respondent (MFR) and Collapsed Structure Search and Rescue (CSSR) training are being given to Medical officers and security officers.
- ❑ Earthquake Simulation Exercise (INSARAG) has been conducted in 2009.
- ❑ Model agreement between GON and UN to expedite import/export and transit of relief consignments in the event of disasters and emergencies was signed on 31 May, 2007.
- ❑ A comprehensive Logistics Capacity Assessment of Nepal has been done.

Level of Progress

Priority Action: 1	Indicators	Level of Progress
<p style="color: green; font-weight: bold;">Ensure that disaster risk reduction is a national and local priority with a strong institutional basis for implementation</p>	National policy and legal framework for disaster risk reduction exists with decentralized responsibilities and capacities at all levels	3
	Dedicated and adequate resources are available to implement disaster risk reduction plans and activities at all administrative levels	2
	Community participation and decentralization are ensured through the delegation of authority and resources to local levels	3
	A national multi-sectoral platform for disaster risk reduction is functioning	3

Level of Progress

Priority Action :2	Indicators	Level of Progress
<p style="color: green; font-weight: bold;">Identify, assess and monitor disaster risks and enhance early warning</p>	National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors	3
	Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities	3
	Early warning systems are in place for all major hazards, with outreach to communities	3
	National and local risk assessments take account of regional / transboundary risks	3

Level of Progress

Priority Action: 3	Indicators	Level of Progress
<p style="color: green; font-weight: bold;">Use knowledge, innovation and education to build a culture of safety and resilience at all levels</p>	Relevant information on disasters is available and accessible at all levels, to all stakeholders	2
	School curricula, education material and relevant trainings include disaster risk reduction and recovery concepts and practices	3
	Research methods and tools for multi-risk assessments and cost benefit analysis are developed and strengthened	2
	Countrywide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities	3

Level of Progress

Priority Action: 4	Indicators	Level of Progress
<p style="color: green; font-weight: bold;">Reduce the underlying risk factors</p>	Disaster risk reduction is an integral objective of environment related policies and plans	3
	Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk	2
	Economic and productive sectorial policies and plans have been implemented to reduce the vulnerability of economic activities	2
	Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes	2
	Disaster risk reduction measures are integrated into post disaster recovery and rehabilitation processes	3
	procedures are in place to assess the disaster risk impacts of major development projects	2

Level of Progress

Priority Action:5	Indicators	Level of Progress
Strengthen disaster preparedness for effective response at all levels	Strong policy, technical and institutional capacities and mechanisms for disaster risk management, with a disaster risk reduction perspective are in place	3
	Disaster preparedness plans and contingency plans are in place at all administrative levels	3
	Financial reserves and contingency mechanisms are in place to support effective response and recovery when required	3
	Procedures are in place to exchange relevant information during hazard events and disasters, and to undertake post-event reviews	3

Level of Progress

 Overall (2.6)

3	There is some commitment and capacities to achieving DRR but progress is not substantial .
2	Achievements have been made but are relatively small or incomplete , and while improvements are planned, the commitment and capacities are limited.

5. Recent Major projects on DRR



5.1 Five Flagship program on disaster Risk reduction

5 Flagship Programmes	Coordinator	Amount	Committed	Gap
School and hospital safety – structural and non-structural aspects of making schools and hospitals earthquake resilient	AsDB (WHO)	\$50.8 million	\$4.6 million	\$46.2 million
Emergency preparedness and response capacity	OCHA	\$28 million	\$9.95 million	\$18.05 million
Flood management in the Koshi River basin	World Bank	\$24.2 million	\$2 million	\$22.2 million
Integrated community based Disaster Risk Reduction / management	IFRC	\$30 million	\$4.25 million	\$25.75 million
Policy/institutional support for disaster risk management (DRM)	UNDP	\$13.8 million	\$3.25 million	\$10.55 million
Total		\$146.8 million	\$24.05 million	\$122.75 million

Flagship 1 – School and Hospital Safety



Financing Plan and Planned Activities under School and Hospital Components to be implemented over next 4 - 5 years

School Component		
Structural and nonstructural vulnerability Assessment	900 school buildings in KV and 100 school building outside KV	\$5.2 million
Physical Retrofitting and seismic strengthening	900 school buildings in KV and 100 school building outside KV	\$24.6 million
Construction Supervision, awareness and training	Mainstreamed in the above activities	
Total		\$29.8 million

Hospital Component		
Structural and nonstructural vulnerability Assessment	Assessment and reassessment of hospitals in KV (above 50 beds)	\$0.085 million
Physical Retrofitting and seismic strengthening	Setting up of guidelines, training, prioritization, retrofitting of 14 hospitals, nonstructural retrofitting in phase wise approach	\$20.9 million
Construction Supervision, awareness and training	Training of hospital administrator and engineers	\$0.14 million
Total		\$21.13 million

Amount	Committed	Gap
\$50.8 million	\$5.76 million	\$45.04 million

Flagship 2: Emergency Preparedness and Response Capacity

1. Create two national Medium level USAR teams in Nepal for collapsed structure rescue.
2. Enhanced capacity of Fire and Ambulance Services in 5 major urban areas with integrated networks for communication systems.
3. National EOC fully operative, 5 Regional EOCs created, and a network of District EOCs established.
4. Standardized response plans and procedures at Regional and District level in 65 Districts and 5 Regions. Contingency planning mainstreamed.
5. Integration of Nepal Army, Armed Police and Nepal Police in preparedness and response activities at all levels.
6. Rehabilitation and construction of a country-wide network of warehouses with standardized procedures for maintenance and management of pre-positioned stocks and NFIs.
7. Integrated IDP “open sites” developed with cross-cluster support, e.g. WASH, Logistics, Health, Food Security, Shelter etc
8. Creation of coordinating mechanisms and structures for receiving and integrating incoming international humanitarian and military assistance.

Total expected budget : US \$28.1 million

Flagship 3: Flood Management in the Koshi River Basin

Non-Structural

- Comprehensive Flood Risk & Vulnerability Assessment
- Enhanced Flood Forecasting and Early Warning Systems
- Strengthening Institutional capacity
- Increased community resilience to flooding disasters

Structural

- Strengthened Flood Management Structural Measures

☀ Total expected budget : US \$24.2 million



Flagship 4: Integrated Community Based Disaster Risk Management

- Develop disaster resilient communities in 1,000 VDCs / wards over a 5-year period through CBDRR projects.
- Develop a nation-wide, common approach to CBDRR projects with a number of minimum components.
- Ongoing monitoring, evaluation and tracking system to show results.



Flagship 5: Policy/institutional support for Disaster Risk Management

Institutional and policy support for the National DRM strategy

- Supporting DRM mainstreaming, improving risk analysis and fast tracking implementation of the National DRM strategy.

Strengthening the application of building codes and risk sensitive land-use planning

- Supporting effective planning and building code enforcement and fostering public private partnerships for DRM, especially in the Kathmandu Valley

Strengthening national institutional capacity for DRM

- Work with existing national institutions to include DRM in their mandatory curricula and provide context specific training for Government and a cadre of national DRM professionals.

Orienting financial mechanisms towards DRM

- Helping the Government to make informed choices on how to facilitate pro-active risk reduction, and expanding access to risk-transfer mechanisms like micro-insurance, risk pooling or targeted assistance.

Recognizing that managing disaster risk effectively will help Nepal adapt to climate change

- Bringing DRM and CCA stakeholders together, reducing duplication and finding co-benefits for effective investment.

6. ADRC Counterpart

- ☀ Ministry of Home Affairs ,Nepal
- ☀ Planning and Special Service Division
- ☀ Joint Secretary
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