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National Disaster Risk Reduction Plan and Post-Earthquake Reconstruction Efforts in Nepal



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Nepal

- **Location:** Sandwiched between India and China
- **Population:** 28 Million with more than 100 languages
- **Area:** 1,47,181 square kilometers
- **Economy:** Agriculture, Remittance
- **GDP :** 21 billion USD (2015)
- **Budget:** 10 billion USD
- **Disaster:** Minisupermarket

Disasters in Nepal

- Earthquake
- Flood and Landslide
- GLOF
- Fire
- Thunderbolt
- Epidemics
- Avalanches
-
- 9th most vulnerable in the world from Earthquake
- 30th most vulnerable from Flood and
- 4th most vulnerable from Climate Change (Mapple Croft 2009)

Rugged and fragile geophysical structure, very high relief, high angle of slopes, complex geology, variable climatic conditions, active tectonic processes, unplanned settlement, dense and increasing population, poor economic condition and low literacy rate

Top Ten Natural Disaster in Nepal (No of Death)

Disaster	Date	Casualty/Killed
Earthquake	15-Jan-1934	9,040
Earthquake	25 April 2015	8,790
Epidemic	15-Jun-1991	1,334
Flood	23-Aug-1993	1,048
Epidemic	Nov-1963	1,000
Flood	12-Jul-1996	768
Earthquake	20-Aug-1988	709
Flood	29-Sep-1981	650
Epidemic	Apr-1992	640
Slide	Jul-2002	472

Top Ten Natural Disaster in Nepal (No of People Affected)

Disaster	Date	Affected
Earthquake	25 April 2015	8,000,000
Drought	19-May-1980	3,500,000
Drought	1973	900,000
Flood	23-Aug-1993	553,268
Flood	Aug-1987	351,000
Earthquake	20-Aug-1988	301,016
Earthquake	29-Jul-1980	275,600
Slide	Jul-2002	265,865
Flood	Sep-1983	200,050
Flood	12-Jul-1996	151,382

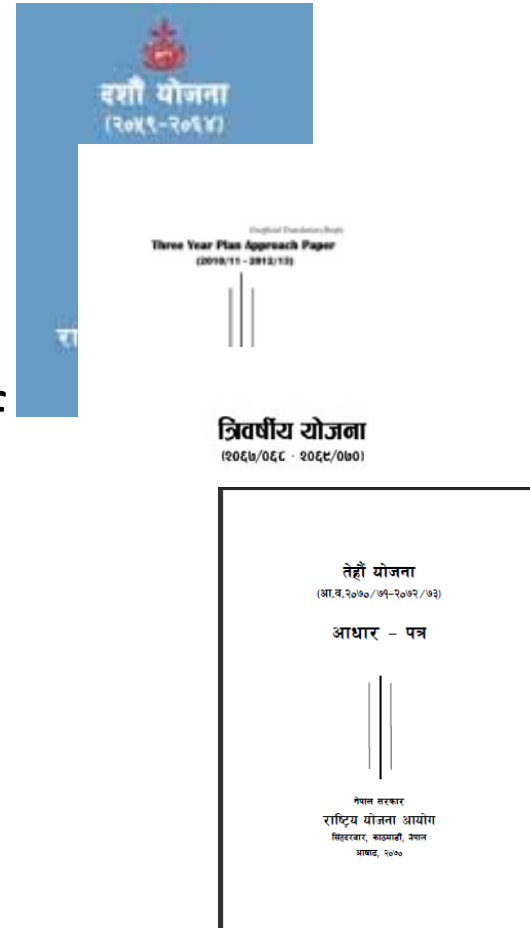
Disaster Management in Nepal

- Disaster as Devine Works: punishment by god to people for their sin
- Rescue and Relief
- National Natural Calamity Relief Act 1982



Disaster Risk Management in Development Planning

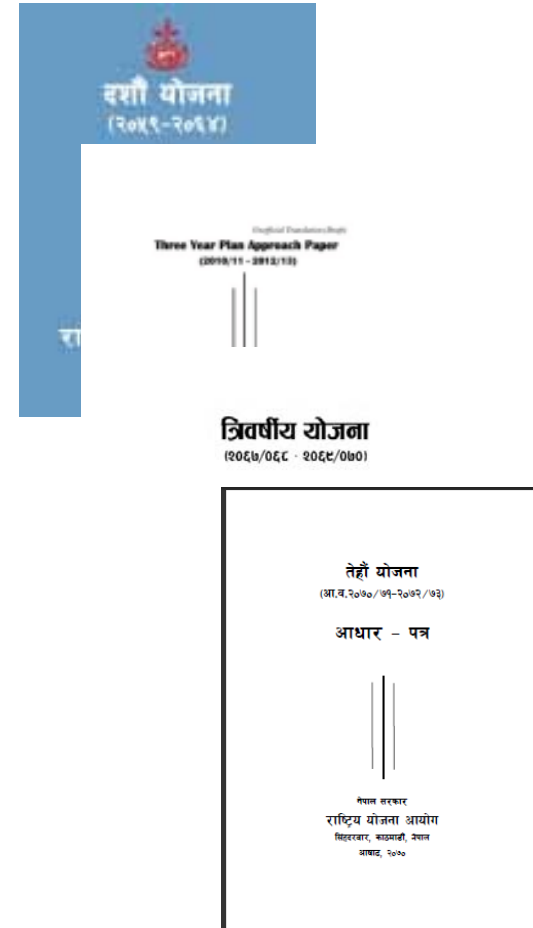
- Paradigm shift in 10th five yr plan (2002-2007) for DRM
- For the first time, mentioned DRR as a priority.
- Stressed on new policy formation in the context of disaster mgmt.
- Emphasized on the need for policy formulation, strengthened institutional mechanisms and coordination, risk assessment, information collection and dissemination.



Disaster Risk Management in Development Planning

Eleven Three-year Interim Plan (2007-2010)

- Recognized the importance of DRR and mitigation,
- Changes into the sectoral national policies,
- Shift of focus from disaster response to prevention, mitigation and preparedness.



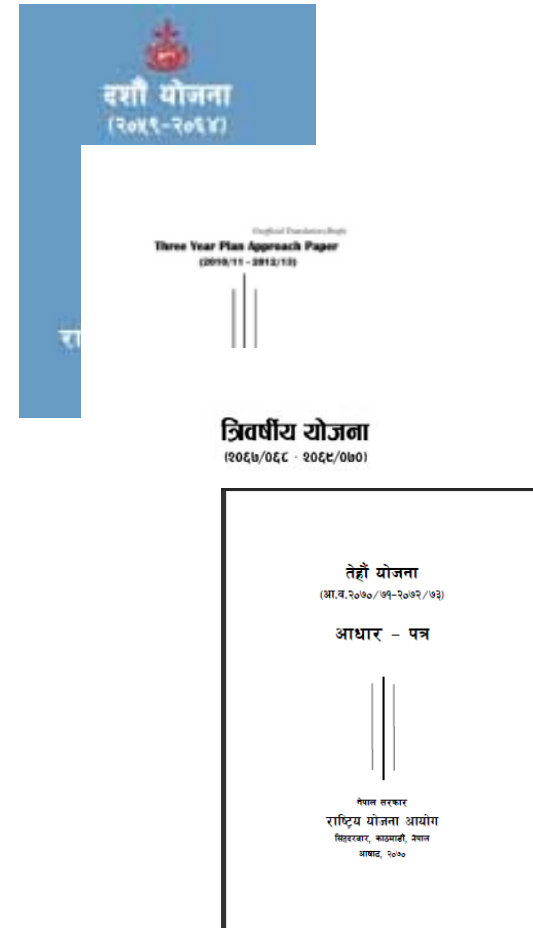
Disaster Risk Management in Development Planning

Twelve Three- year Interim Plan (2010-2013)

- Commitment to Hyogo Framework of Action HFA 2005 and Incheon Road Map on DRR/CCA, Incheon Declaration 2010.
- The plan envisages a New Disaster Reduction Act to replace the old one.
- Mainstream all Stakeholders involved in DRR

Thirteenth Three- year Interim Plan (2013-2015)

- Disaster Risk as a component for development.
- Mainstreaming DRM in national development
-



* बुद्धि, श्रम, जनशक्ति, स्वास्थ्य, शिक्षा राखी ! सुन्दर, सुखायित र समृद्ध बासिन्दा हामी *

आवाधिक जिल्ला विकास योजना
ओखलढुंगा

प्रथम पञ्चवर्षीय योजना
(२०६९/७० - २०७३/७४)

जिल्ला पार्ष्वचित्र (District Profile)

भाग १

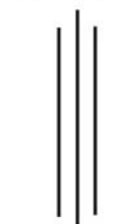
जिल्ला विकास समिति, ओखलढुंगा
२०६९ वैशाख

वस्तुगत विवरण तथा
आवाधिक दिगो विकास योजना
आ.स. २०७२/७३ देखि २०७६/७७

बतासे गाउँ विकास समिति
सोटाङ - २०७९

वस्तुगत विकास तथा आवाधिक दिगो विकास योजना
बतासे गाउँ विकास समिति - २०७९

स्थानीय विपद जोखिम व्यवस्थापन योजना तर्जुमा
निर्देशिका, २०६८
(Local Disaster Risk Management Planning
Guideline-LDRMP), 2068



नेपाल सरकार
स्थानीय विकास मन्त्रालय
२०६८

Ministry of Agriculture
and Cooperatives (MOAC)

Food and Agriculture
Organization of the United Nations

District Disaster Risk Management Plan
(DDRMP)

Arghakhanchi District

April 2011

Municipal Periodic Plan (MPP): in Nepalese Context

(evolution, practice and processes)

Natural Calamity Relief Act 1982

Cabinet

Policy, Budget Emergency Declaration

Central Disaster Relief Committee

(Hon. Home Minister as Chairperson, member all key ministries, departments of key ministries, Departments, two experts, NRCS etc)

Coordination, Rescue, Relief and Response

Relief and Treatment Subcommittee

(Minister MoH Coordinator, Member key ministries and Departments)

Resource mobilization and coordination, quick response

Supply, Shelter and Rehabilitation Subcommittee

(Minster MoUD Coordinator, member key ministries and depts)

Codes, standards, program design and coordination for quick response

Natural Calamity Relief Act 1982



Regional Disaster Relief Committee

(Regional Administrator coordinator, CDOs and directors of key departments' member)

Regional Resource Mobilization, Direction and Coordination



District Disaster Relief Committee

(CDO Chairperson, Line agencies and NGOs as members)

Rescue, Relief, Data Collection, Program Execution

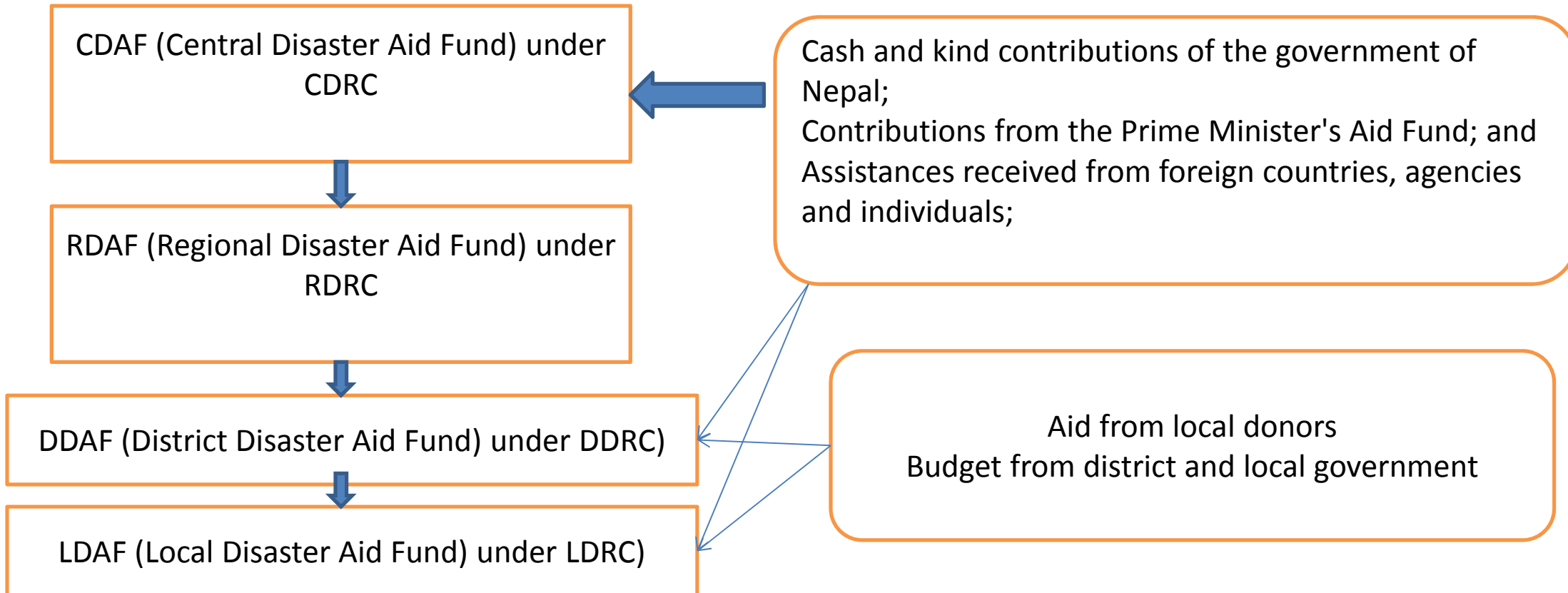


Local Disaster Relief Committee

(Mayor/VDC chairperson as coordination, ward chairperson and local people as member)

Information sharing, mobilize local resources, rescue, relief, data collection

Flow of Fund



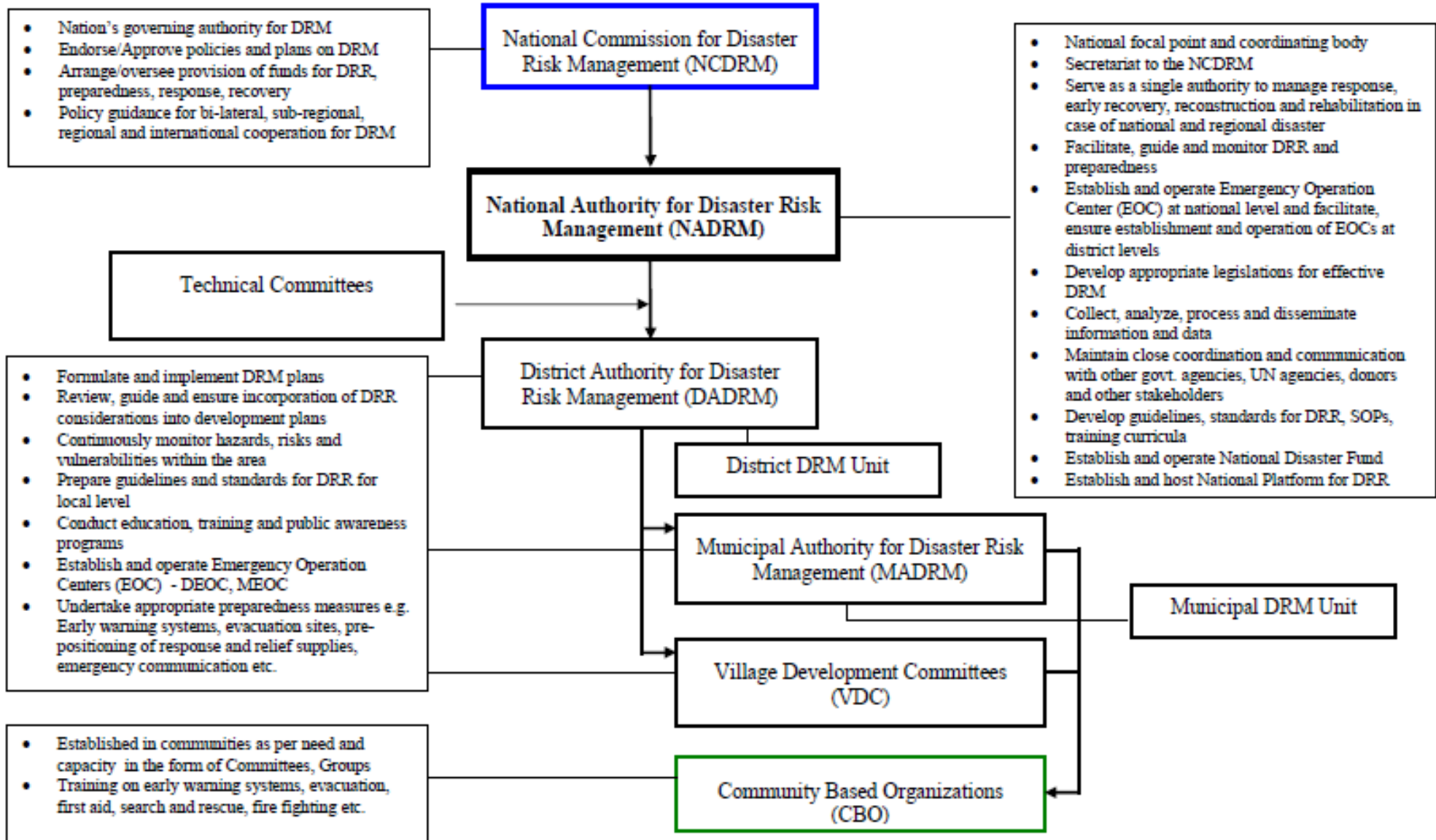
Other Acts

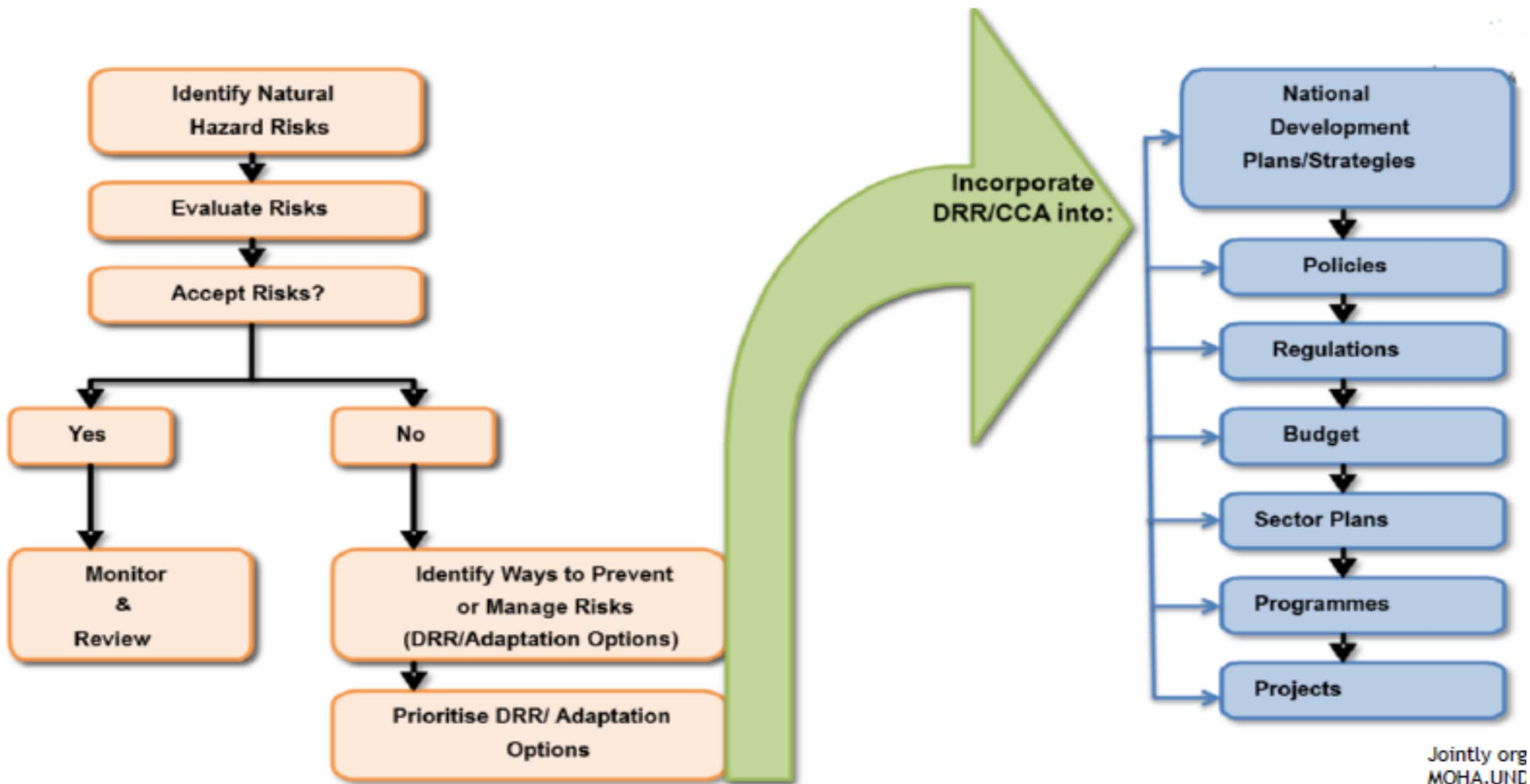
- Self Governance Act 1998
 - Authorizes local authorities to carry out programs and projects for DRR
 - Create local DRR fund (2% of it budget)
 - Collect information/data and share with national platform
- Other Acts
 - Army Act
 - Police Act

National Strategy for DRM 2009

- Human Rights and Protection, Gender and Social Inclusion, Decentralization and Local Self-Governance, and Humanitarian Security, and recommends implementation of DRM by mainstreaming these in each sectoral plans and programmes as per HFA 2005
- Mainstream in sectoral plans
- Capacity Building (central govt, engineers, masons, contractors..)
- DRM in University and School

Institutional Structure for Disaster Risk Management and their Roles





Mainstreaming DRR/CCA in Development Planning

- **Nepal Risk Reduction Consortium**
 - School and Hospital Safety
 - Emergency Preparedness and Response Capacity
 - Floods Management in the Koshi River Basin
 - Integrated Community Based Disaster Risk Reduction Management
 - Policy/ Institutional Support for Disaster Risk Management
- **National Platform on DRR**
- **National Emergency Operation Center (NEOC, REOC, DEOC)**
- **Draft Disaster Management Act (MoHA 2015)**

National Disaster Response Framework (NDRF), 2013

- Capacity Enhancement of Government as well as local communities
- Education and Training: DRR has been internalized school curricula, various trainings and a separate degree course on DRM has been designed and executed in the university
- Development of Early Warning System: Earthquake Monitoring, Flood Monitoring, Trans-boundary flood EWS, EWS for GLOF, IT for DRR
- Mainstreaming of DRR in Media Reporting

Part II

- **POST EARTHQUAKE RECONSTRUCTION EFFORTS IN NEPAL**

Nepal Struck with Mega Earthquake

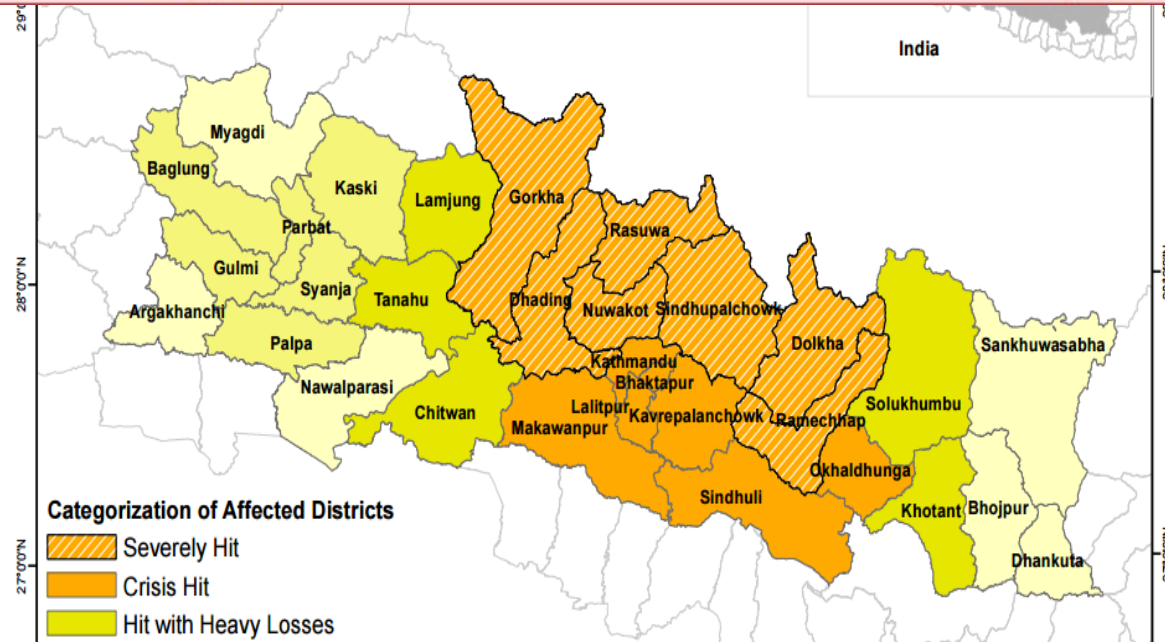
- April 25, 2015
- 11.56 AM
- M 7.8 Earthquake with Gorkha as Epicentre
- M 6.8 aftershock May 12 with Epicentre in Dolkha/ Sindhupalchowk



Losses

Typology of buildings	Fully collapsed or beyond repairs	Partially damaged (can be repaired/ retrofitted)
Low-strength masonry	474,025 (95%)	173,867 (67.7%)
Cement-based masonry	18,214 (3.7%)	65,859 (25.6%)
Reinforced concrete frame	6,613 (1.7%)	16,971 (6.7%)
Total	498,852	256,697

- 8,790 casualties and 22,300 injuries
- Total Estimated Loss in Million USD = \$7,065
- Housing and Human Settlement Sector = \$350,540 M



Formulation of Act, Rules, Regulations and Guidelines

1. Reconstruction Act and Regulations, 2072
2. National Reconstruction Policy, 2072
3. Five Year Reconstruction Plan (PDRF) (072/73-077/78)

Policies
and
Guideline

Directives and Guidelines (14 nos)

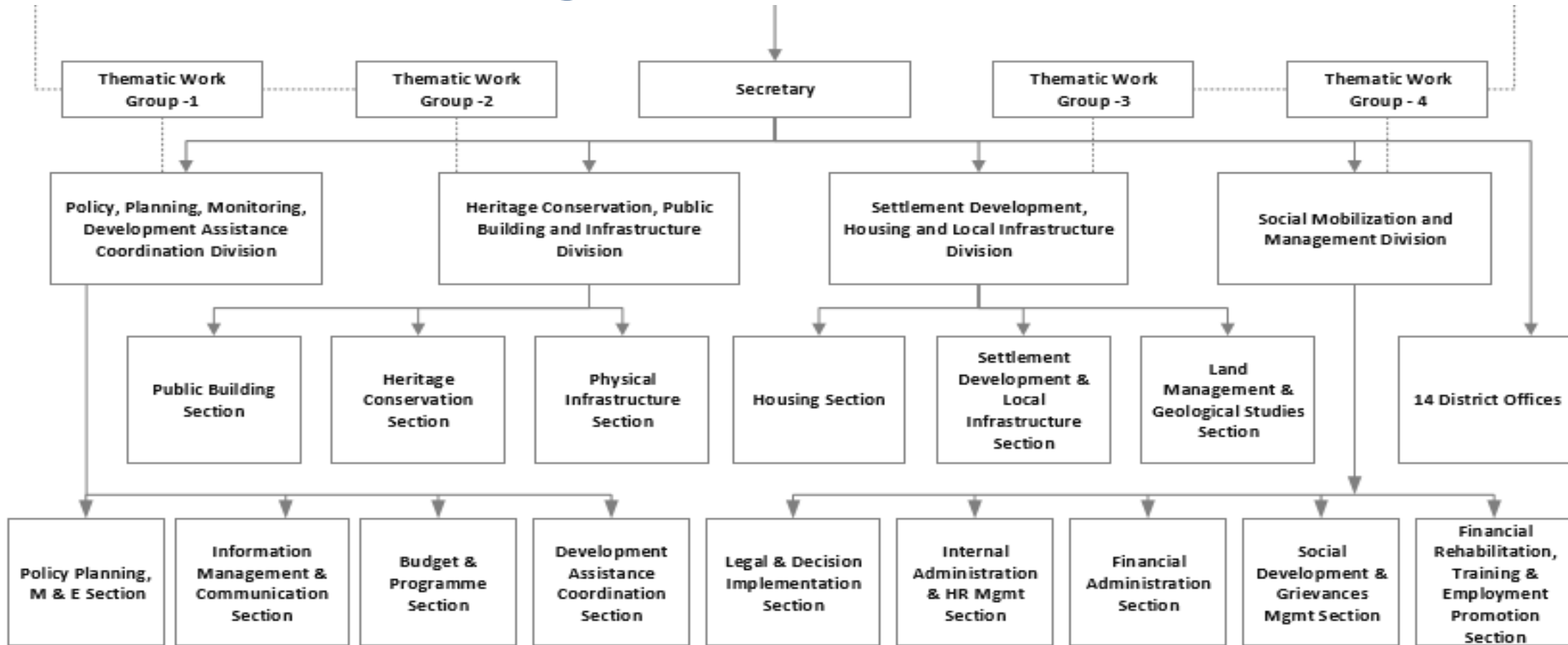
1. Grant distribution SOP for housing grant distribution, 2072
2. SOP for mobilizing NGOs in reconstruction, 2072
3. SOP for Grievance handling, 2072
4. SOP for public procurement
5. SOP for land registration

6. SOP for acquiring forest land
7. SOP for Training
8. SOP for Private house Inspection
9. SOP for IEE
10. SOP for mobilizing reconstruction fund
11. SOP for heritage conservation
12. SOP for land acquisition
13. SOP - Local Community Reconstruction Committee
14. Appellate SOP

NRA Organization Structure



NRA Organization Structure



Efforts

- Household surveys
- Housing grants and reconstruction of private homes
- Hiring, training and Deputation of 1348 Engineers in affected VDCs and Municipalities
- Temporary residences, and community shelters
- Reconstruction of cultural heritage



Community reconstruction of the Boudhanath *stupa*.



Efforts

- **Partnerships with INGOs**
 - for construction of 27 health institutions
 - reconstruction of Godamchaur Model Village
 - relocation and construction of Larpak
 - Dhurmus Sunthali Foundation
- **Reconstruction of schools**
- *Trainings to 15000 masons/carpenters and 2600 engineers*



Knowledge Update

- Revisit the NBC
- Revisit the Building and planning Bye laws (New in Place)
- Alternative Materials and Technologies
- Technologies to Rural Areas
- Development of 17 housing models



DESIGN CATALOGUE FOR RECONSTRUCTION OF EARTHQUAKE RESISTANT HOUSES

Volume I



October, 2015 (Aswin, 2072)



Nepal Housing
Reconstruction Programme

Government of Nepal
Ministry of Urban Development
Department of Urban Development and Building Construction
Babarmahal, Kathmandu

Issues

- Split in Family
- Land ownership
- Construction Quality Control
- Supply chain management of manufactured construction materials – cement, reinforcement, CGI Sheet
- Mining of local construction materials:
 - Stone, Timber, Sand, Aggregate

Issues

- Linking reconstruction with livelihood
- Assimilation of BBB concept (integrated planning)
- incorporation of SMART village concept
- Small land parcel size in urban areas
- Land readjustment in urban and rural areas

Conclusion

- Nepal has embarked on reducing disaster risk exposures and vulnerability. It has developed all the instruments like policies and guidelines, however the implementation and enforcement is very weak mainly due to absence of elected bodies for last 15 yrs
- Nepal is in dire need of speedy reconstruction of settlements, schools and health posts along with heritages that were damaged due to 2015 earthquake.
- Despite having all the policies, guidelines, fund and skilled human resources in place, the reconstruction could not take the desired pace
- Need for scientific thinking
- New knowledge and approach

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Thank You for Listening