Disaster risk reduction and management in Nepal: Delineation of roles and responsibilities

Summary report

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F Policy and Institutions Facility

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Table of contents

List of abbreviations	ii
1: Introduction	1
1.1 National DRRM context	1
1.2 Rationale for this study	1
1.3 Study objective and methodology	1
2: Categorizing hazards and disasters	2
2.2 Disasters	2
3: Required and existing capacity of local governments	3
3.1 Local governments and DRRM	3
3.2 Key characteristics of framework for local governments' DRRM capacity	3
3.3 Proposed minimum required DRRM capacities for local governments	4
4: Existing and minimum required capacity at provincial and federal levels	5
4: Existing and minimum required capacity at provincial and federal levels 4.1 Existing capacities of provincial governments	5 5
 4: Existing and minimum required capacity at provincial and federal levels 4.1 Existing capacities of provincial governments 4.2 Existing capacities of the federal government 	5 5 5
 4: Existing and minimum required capacity at provincial and federal levels	5 5 5 5
 4: Existing and minimum required capacity at provincial and federal levels	5 5 5 5 5
 4: Existing and minimum required capacity at provincial and federal levels	5 5 5 5 7
 4: Existing and minimum required capacity at provincial and federal levels	5 5 5 5 5 7 7
 4: Existing and minimum required capacity at provincial and federal levels	55555777
 4: Existing and minimum required capacity at provincial and federal levels	555557778
 4: Existing and minimum required capacity at provincial and federal levels	5 5 5 5 5 7 7 7 8 9

List of abbreviations

CRED	Centre for Research and Epidemiology of Disasters
DAO	District Administration Office
DDMC	District Disaster Management Committee
DFID	Department For International Development (of United Kingdom)
DHM	Department of Hydrology and Meteorology
DMG	Department of Mine and Geology
DRR	Disaster Risk Reduction
DRRM	Disaster Risk Reduction and Management
FG	Federal Government
GoN	Government of Nepal
HR	Human Resource
LG	Local Government
MoHA	Ministry of Home Affairs
N/P/D/L/EOC	National/Provincial/District/Local Emergency Operation Centre
NDRF	National Disaster Response Framework
NDRRMA	National Disaster Risk Reduction and Management Authority
PG	Provincial Government
UNDRR	United Nations Office for Disaster Risk Reduction

1: Introduction

1.1 National DRRM context

Nepal's disaster governance architecture is principally guided by Nepal's Constitution (2015) and the Disaster Risk Reduction and Management (DRRM) Act 2074. The Constitution stipulates disaster risk reduction and management (DRRM) as a sole authority of local government and also as a shared authority amongst all three tiers of government. The spirit of the constitution suggests that local governments shall do as much as they can on their own, and where they cannot, provincial and federal governments shall provide back-up or assume primary responsibilities.

The division of authority, responsibility and accountability related to DRRM is based on the nature, intensity, and scale of disasters. However, while the Constitution clearly delineates some of these responsibilities, the existing policy framework does not adequately answer the question: **who will do what and how during a disaster?**

1.2 Rationale for this study

To address this issue, the Ministry of Home Affairs (MoHA) was tasked with the formulation of a legal draft on the: "delineation of authority, responsibility and accountability between federal, provincial and local levels according to the nature, intensity and scale of the disaster.", while considering jurisdictional mandates, the capacity of local governments in the different regions and universally accepted DRRM principles.

The Policy and Institutions Facility (PIF)¹, a component of DFID's Disaster Resilience Programme for the Government of Nepal (GoN) agreed to provide technical assistance to carry out this study, upon which a draft legal framework may be prepared.

1.3 Study objective and methodology

The primary objective of this study is to provide policy recommendations on the delineation of roles, responsibility and accountability of federal, provincial and local governments for disaster risk reduction and management according to the nature, intensity and scale of the disaster. The methodology included: (i) an academic literature review and interdisciplinary reflections; (ii) feedback from consultations with 28 local government leaders and bureaucrats; and, (iii) consultations with experts and agencies.

This study tries to build on existing countrywide jurisdictions and initiatives to identify ways to address gaps to ensure an efficient DRRM architecture in the Federal Democratic Republic of Nepal.

¹ The Policy and Institutions Facility (PIF) is a policy support function within DFID/Nepal's disaster resilience portfolio, designed to support the Government of Nepal. It is managed by Oxford Policy Management Ltd. For details, https://www.opml.co.uk/projects/strengthening-climate-and-disaster-resilience-in-nepal

2: Categorizing hazards and disasters

The United Nations Office for Disaster Risk Reduction (UNDRR) defines disaster as "a result of interplay of: (i) exposure to a hazard; (ii) conditions of vulnerability that are present; and (iii) insufficient capacity...to reduce or cope with the potential negative consequences". "Hazards" are described as "phenomena or an event that has potential to cause loss of life, property and disruption of services".

The origins of disasters can be natural, human-induced, technological or industrial. Nepal experiences many types of disasters which vary in their nature, magnitude, geographic distribution, and respective impacts on people's lives, properties and livelihoods. Nepal's Disaster Risk Reduction and Management (DRRM) Act 2074 categorizes hazards and disasters into "natural" (i.e. floods, fires, earthquakes, landslides, etc.) and "non-natural" (i.e., epidemics, famine, collapse or destruction of infrastructure, industrial accidents, etc.). However, both hazards and disasters can be further categorised for delineating responsibilities to appropriate levels of government.

2.1 Hazards

Hazards can be differentiated by their **frequency** (i.e. how often a particular hazard occurs in a given place over a specified time) and their **intensity** (i.e. how severe it is, how much damage it can cause). The intensity of a given hazard does not determine its consequences, nor the response required until the human or economic impacts are assessed. Hazards can be also be grouped into **rapid onset** (e.g. earthquakes, landslides, floods) and **slow onset** (e.g. droughts and heatwaves, insect infestations, epidemics) requiring different response and management strategies.

2.2 Disasters

Disasters are classified by international agencies² by:

- (1) number of human deaths (including missing persons)
- (2) affected population (needing immediate food and assistance)
- (3) affected territory declaring emergency, and
- (4) need for external support.

The severity of a disaster is a function of the scale of the hazard and its impact on fatalities, injuries, and/or economic damage. The other point to consider is its potential for further impacts. Sometimes a small incident (e.g. landslide or localised flooding) can lead to a more catastrophic cascading effect (e.g. landslide blocking off roads which in turns leads to food and essentials shortages, or flooding causing a cholera outbreak).

The categorization of hazards and disasters is an important element in the formulation of a framework for effective disaster management. Categorization helps in activating different emergency procedures, establishing required levels of effort, and assigning differentiated roles to different levels of governments, which can then act in a timely manner. However, there is inherent complexity and uncertainty in managing any level of disaster. Thus, it is important to have provisions where local governments can seek support whenever they deem a hazard event and its consequences to be beyond their capacity to manage.

² EM-DAT, the international disaster database of the Centre for Research and Epidemiology of Disasters (CRED) and by the Sendai Framework for Action for Disaster reduction (UNDRR).

Based on a literature review, consultations with sector experts and a review of international best practice, the study team has suggested some criteria (See Annex 1) to categorize hazards and disasters as a means to determine the main responsibilities of different government tiers.

3: Required and existing capacity of local governments

3.1 Local governments and DRRM

In the Federal Democratic Republic of Nepal, local government (LG) is the closest government unit to the people, so the Constitution of Nepal mandates their leadership on disaster management. Global commitments on DRRM, such as the *Sendai Framework for Disaster Risk Reduction*, also set targets for LGs' preparedness for disaster management. LGs are central to DRRM because they have a greater understanding of the local context, better access to indigenous knowledge and greater access to at-risk populations. As the closest political units accountable to citizens, LGs DRRM capabilities can enhance the social compact between communities and the federal state.

LGs need DRRM capacity on governance structures and mechanisms, physical infrastructure, human resources, material acquisition, skills and access to services and on effective organization of resources to prevent hazards and vulnerability, mitigate disaster risks, and prepare and manage consequences. LGs must be prepared to respond to even large-scale disasters using existing capacity when high magnitude hazards (e.g. earthquake, landslides, and floods) disrupt access from outside. Therefore, there is no single definition of the minimum DRRM capacity required for LGs for several reasons.

Both the required and the actual capacity of LGs vary due to several factors:

- 1. Vulnerability and risks they face due to their geography, physiography, socio-cultural and economic endowments, demography, natural resource base, human development, remoteness, literacy, physical infrastructure, services and markets, language, and culture.³
- 2. The institutional capacity they have developed (organisational capacity, physical infrastructure, and legal and regulatory mechanisms).
- 3. Their relative experience of disaster management that improves capacity for anticipatory planning and effective response to different disasters.

3.2 Key characteristics of framework for local governments' DRRM capacity

To meaningfully fulfil their role, LGs will have to enhance their overall capacity on hazard mitigation, disaster risk reduction, preparedness, response, recovery and integrate risk reduction measures into their development planning process. This will help to institutionalise the recommended capacity framework for each type of Palika, as per the LGO Act 2074.

The DRRM capacity framework should, at a minimum, encompass the following characteristics:

- 1. Representative: be applicable to all 753 municipalities.
- 2. Comprehensive: encompass life-cycle and thematic components of DRRM.
- 3. Aligned with existing policies and laws: enable Palikas to contribute to targets within the DRRM National Strategic Plan of Action (2018-2030), National DRRM Policy (2075), DRRM Act (2074), and LGO Act (2074).

³ IOM & MoFAGA (2019). Needs and Capacity Assessment of Fourteen Rural and Urban Municipalities on Disaster Risk Reduction and Management in Nepal. Ministry of Federal Affairs and General Administration. Kathmandu.

- 4. **Inclusive**: address needs of geography, culture, social diversity, and gender and social inclusion issues by adopting *Leave No one Behind* (LNoB) principles that promote social inclusion, equitable and empowered decision-making by disadvantaged and marginalized groups.
- 5. **Evidence-based**: draw on evidence from Nepal and international best practice.
- 6. **Incremental:** encourage LG to set and attain higher DRRM aspirations.

3.3 Proposed minimum required DRRM capacities for local governments

A framework for required minimum capacity proposed (See table 9 in the main report) was formulated to fulfil legal mandates and practical requirements. Recognising the diversity of Nepal, the framework represents and reflects the specific needs of municipalities and physiographic regions, namely: Himali Region, Hill Region, Inner Tarai and Tarai Region.

The capacity components of this proposed model are categorized into: **DRRM Governance**, **Risk** and **Vulnerability Reduction**, **Knowledge and Education**, **Preparedness and Response**, and **Rehabilitation and Reconstruction**. The model was devised by the NRRC, UNDRR's 100 Resilient Cities campaign, and existing humanitarian clusters in Nepal.

In the development of these criteria, we also considered capacity approaches contained in disaster preparedness planning documents of the Humanitarian Country Team (HCT). However, the capacity criteria and indicators in Table 9 are subject to improvement as the DRRM context changes. Suggested attributes in the proposed model are minimal, meaning that each municipality can set higher aspirations, according to their needs, resources and ambitions.

The detailed report of the study provides an assessment of the current capacities of local governments against the minimum capacities needed. Not surprisingly, this shows that capacity remains very weak and needs to be strengthened urgently, especially as climate-induced catastrophic events will continue to increase in intensity and frequency. The highest priority areas to be strengthened are:

- **Governance**: establish a more systematic needs-based approach to DRRM resource allocation, aligned with local governments' understanding of hazards, vulnerabilities and disaster risks and their respective Development Plans.
- **Risk and Vulnerability Reduction:** build the technical capacity of local governments to systematically assess hazards and vulnerabilities (map hazard risks) and make provisions that enable Palikas to have adequate institutional structures to forecast disaster risks (e.g., floods).
- **DRRM Knowledge and Education:** systematically build public awareness to help manage multiple hazard risks and other vulnerabilities and equip municipalities to maintain loss and damage registers.
- **Preparedness and Response**: strengthen Palikas overall capacity on disaster preparedness and response through municipal relief supply warehouses (beyond provincial warehouse infrastructure) and DRRM plans and formal inter-governmental agreements for access to relief supplies (e.g. health supplies, nutrition support, emergency shelters and communications, early recovery systems and logistic facilities).
- **Rehabilitation and Reconstruction:** build LGs capacity for post-disaster recovery and reconstruction as well as harmonize provincial and federal support.

4: Existing and minimum required capacity at provincial and federal levels

4.1 Existing capacities of provincial governments

Similar to Palikas, provincial governments (PGs) are recently formed jurisdictions, and are only now starting to operationalize within the federal landscape. Provinces are supposed to serve as a bridge between federal and LG disaster management responsibilities. Therefore, they are assigned roles of coordination, facilitation, and monitoring along with execution at some scale. All provinces are deemed to be at risk of exposure and vulnerability to multiple hazard events. As they are in the process of building their DRRM institutional capacity, requirements to manage these hazards by provinces require significant bolstering (see Table 10 and Table 11 in the main report).

4.2 Existing capacities of the federal government

The federal government has an overarching DRRM role. It bears overall responsibility and ultimate accountability to ensure the proper implementation of constitutional authority on DRRM at all three government tiers. However, federal government also has to enhance its capacity to be able to address existing and potential challenges in DRRM (see Table 12 in the main report).

4.3 Intergovernmental collaboration for DRRM

Institutional capacity at all levels remains below the levels that the federal, provincial and local governments require to effectively carry out their DRRM responsibilities confidently. Just as the capacity to implement DRRM functions is a priority, coordination within governments and between them is equally critical to successfully handle major disaster events.

Federal agencies strive to coordinate DRRM inter-agency policies, plans, and actions amongst their respective ministries and departments. There is a perceived delay in transforming DRRM structures and functions under the federalized decentralization process. DRRM mainstreaming and operationalization is even more challenging at provincial level, as institutional structures and staffing resources are inadequate to undertake more demanding designated roles and responsibilities. Notwithstanding, provincial governments are trying to better coordinate DRRM initiatives with local and federal governments.

While the challenges of inter-governmental coordination with provincial and local governments are partly attributed to a lack of human resources, at federal level challenges seem more bureaucratic in nature. Therefore, simply increasing human resources may be inadequate to address inter-governmental coordination gaps. Moreover, the tension between operationalizing the constitutional mandate to decentralize DRRM and the inclination of central government to continue to manage DRRM priorities have unintentionally diminished the DDMCs effectiveness.

The DRRM National Council, which provides a strong mechanism for coordination between federal and provincial governments, has held meetings that have not yet addressed these complex inter-governmental coordination issues. The challenges in carrying out this inter-governmental coordination and collaboration role is partly attributed to a lack of institutional incentives to mobilize support for this NDRRMA coordination mandate.

5: Conclusion and recommendations

Despite recent provisions to decentralize decision-making and empower LGs, roles and responsibility remain vague and poorly delineated between the three levels of government. For

efficient DRRM governance, a meticulous delineation of roles and responsibilities is essential. Ultimately, the delineation of responsibility needs to account for existing institutional capacities.

Thus, each government should be accountable to build its own minimum institutional capacity (e.g. human resources, professional and technical skills, governance tools, disaster relief supplies) to assume its roles/responsibilities within its respective jurisdiction. Given that both LGs and PGs are in their nascent stages of development and have limited capacities, it should initially be the responsibility of the more resource-rich federal government to provide greater support to them.

Based on study consultations and referencing findings outlined in the preceding sections, the study authors recommend the following:

General recommendations

1. Categorize disasters according to nature of the hazard, level of impact, and potential to cross jurisdictional boundaries. This categorization should then inform the delineation of responsibilities. Categories should be reviewed and revised routinely according to newly available information. Our proposals for hazard categories/scales and thresholds for delineation of responsibility are set out in Annex 1 of this report.

As per current jurisdiction, it is the DRRM National Council who decides on these levels along with underlying criteria, indicators and thresholds. The criteria and indicators are relative to existing national capacity, which builds on local, provincial and federal capacity and can change over time. The Council shall put in place a monitoring and revision schedule along with overall DRRM progress as per the National DRRM Strategic Action Plan.

- 2. The DDMC and Province Disaster Management Council shall function as coordination mechanism and back up support to local governments. The DDMC can facilitate discussions and decisions on specific thresholds and mechanisms for organizing disaster management support in case a situation is beyond local government capacity. The Province Disaster Management Council can elaborate further criteria and indicators considering the context of local governments in the province. The Council and the DDMC can be important platforms to resolve disagreements between governments, address variations in capacities to respond to disasters and establish appropriate support mechanisms.
- 3. Each local government needs to decide on their external support needs, however the respective province must act if local government fails to make necessary decisions in time during an emergency. It is important that local government has the autonomy to self-evaluate the consequences of disasters and has the right to ask for support from other local governments, province and federal government including offices in respective districts if they cannot effectively respond to a disaster. It is matter of coordination between governments through the DDMC, province and federal level.
- 4. As different agencies at different levels of government are best suited to respond to particular components of disasters, responsibilities should be assigned accordingly. For example, responsibility and accountability to monitor and forecast flood, earthquake, windstorms and lightning risks should be attributed to federal agencies such as the Department of Hydrology and Meteorology (DHM) and Department of Mines and Geology (DMG), with the field response such as rescue, relief and coping with consequences assigned to related agencies at federal, province and local level. The NDRRMA should coordinate with various agencies to ensure effective communication of risks and response actions on the ground.

- 5. Decision-making should allow for different levels of government to request support from each other based upon need. For example, if a LG is overwhelmed with a disaster, they should be able request support from PGs or FG. However, this flexibility should only be relied upon in addition to measures to strengthen LG capacities. A yearly self-review of existing capacities at all levels of government would help inform effective disaster preparedness and response plans.
- 6. All levels of government should have more clearly defined jurisdictional roles and responsibilities, and should be held accountable for their fulfilment. To improve role adherence and accountability, meeting or failing to meet targets should be incentivized. For example, additional financing may be provided to LGs from PG and FG budgets upon meeting targets.
- 7. It should be kept in mind that overall, responsibilities are differentiated but complementary. Standard operating procedures at local, provincial and federal level should be immediately operational following a disaster. This will allow a more systemic and effective disaster response.

Recommendations for local governments

- 8. Local governments should:
 - a. Ensure they have enough resources and logistics facilities for Level 0 and 1 disasters;
 - b. **Prepare to manage a Level 2 and 3 disaster initially** (first few hours to days), as LGs are closest to those in need, and it takes time for external agencies to reach there;
 - c. Build capacity to assess immediate relief needs using standard tools;
 - d. Establish and manage relief distribution points/camps to distribute relief supplies and services following a disaster;
 - e. Manage databases of vulnerable populations and disaster risk profiles;
 - f. **Seek technical support** from federal and provincial counterparts for hazard mapping, risk monitoring and reduction, and mainstreaming DRR into Development Plans;
 - g. Immediately inform their respective district agencies, provincial governments, NDRRMA, and other concerned actors of any disaster incidents irrespective of the level of disaster. This allows sufficient time for these actors to more efficiently ready their support;
 - h. **Take early action, based on early warning systems** provided by the province or a federal agency [such as the National Emergency Operation Centre (NEOC)].

Recommendations for provincial governments

- 9. Provincial governments should:
 - a. Aim to lead management of Level-2 scale disasters without federal support, and collaborate with federal agencies for Level 3 disasters;
 - b. Support preparedness activities, and engage in crisis management to backstop disaster response efforts led by local governments;
 - c. **Rapidly assess disaster impact**, and advise the federal government on whether to declare a localized or province-wide emergency; and
 - d. **Be accountable for providing overall guidance to local governments** on their capacity building through supportive policy frameworks, institutional arrangements, human resource development, and material support.

Recommendations for federal government

10. The federal government should:

- a. Bear the ultimate responsibility for the mainstreaming of DRRM across Nepal;
- b. Prepare for and manage Level 3 disasters;
- c. Provide demand-driven support to lower levels of government;
- d. Ensure effective collaboration and co-ordination with international emergency services, and within the provinces during national-level emergencies;
- e. Federal agencies are responsible and accountable for Level-3 disasters and need to provide demand-driven support to the provinces and local governments;
- f. **Build capacity to cope with unprecedented hazards**, such as the Bara-Parsa cyclone or COVID-19, and to take immediate strategic action, in collaboration with the provinces and local government, irrespective of clarity on the level of disaster;
- g. Assume responsibility for seismic, meteorological and hydrological monitoring systems and advanced forecasting and early warning systems as it is untenable for the provinces and local governments to separately establish these costly systems;
- h. Establish harmonized policies and institutional support systems to ensure effective disaster risk reduction and management, in alignment with constitutional and federal legal frameworks.

Interagency coordination and collaboration

- 11. For improved intergovernmental and inter-agency coordination and collaboration, the following is recommended:
 - a. Drawing lessons from the Japanese sister-municipality model which links municipalities together so they can help each other when a disaster strikes, Nepalese municipalities should collaborate to share and combine resources such that an unaffected municipality can assist an impacted one. Provincial DRRMAs should take the responsibility for organising this, linking local governments that are NOT likely to be affected by the same disaster;
 - b. The NDRRMA should:
 - **Coordinate with relevant federal ministries and departments** to enhance monitoring, forecasting and search-and-rescue capacities to be able to respond to different hazards;
 - **Develop and maintain the national database system on disasters**, in addition to maintaining disaster information management systems;
 - Facilitate existing formal and informal coordination and collaboration mechanisms, such as: humanitarian cluster groups, donor groups, I/NGO networks, private sector and civil society organizations; and
 - Facilitate and operate the national Early Warning System with support from respective federal, provincial and local government agencies and including non-governmental agencies, civil society organizations, and the private sector.
 - c. The federal government should coordinate and collaborate with Nepal's development partners, UN agencies, intergovernmental organizations and INGOs for DRRM. Existing mechanisms between these partners, the private sector and groups from civil society should be strengthened at every level.

Annex 1: Criteria for determination of governmental responsibility

Based on the analysis of international practices including EM-DAT, country practices and criteria used in some cases in Nepal such as in BIPAD, NEOC operationalization procedures and NDRF, the study team suggests criteria and indicators to delineate the level/scale of disaster (Table 1).

The indicators can be changed over time as they are relative to existing national capacity, which builds on local, provincial and federal capacity. The indicators can be helpful to governments to determine whether they have the existing capacity to respond to particular consequences such as the treatment of injured persons or supporting people in need of food.

Indicators of Hazards and	Level of Disaster				
Disasters	Level 0	Level 1	Level 2	Level 3	
No. of People Dead	0	<10	10 – 100	>100	
No. of People injured	1-10	<100	100 – 500	>500	
No. of families requiring immediate food support	1-10	<100	100 – 500	>500	
No. of families displaced, requiring immediate shelter support	1-10	<100	100 – 500	>500	
Geographic Spread/Coverage of Hazard	Within a Palika	Multiple Palikas	Multiple Districts	Multiple Provinces	
Extent of property and livelihoods loss and damage	Owner can recover losses & damages with LG support	Owner can recover with support from Palika	Owner and Palika cannot manage recovery	Province cannot manage recovery	
Availability of required emergency support services to disaster response (HR, Equipment, Materials, Space)	Required services are locally available or can be accessed nearby	Locally available, & can be organized based on additional need	Palika needs emergency support	Province needs Federal support	
Potential cascading effects	Low	Medium	High	Severe	
Infectious, communicable disease outbreak risk	Low	Medium	High	High and above	
(Appropriate Indicators to add)					
Primary responsibility to lead response effort	Local	Local	Province	Federal	
Potential back up responsibility/call	May not need	District Offices e.g. DAO	Federal	International Call	

Table 1. Level of disasters

In table 1 above, Level 0 is a situation where a hazard strike has not caused any human deaths/missing, few (<10) people are injured or are in need of immediate shelter or food. The hazard may be of a localised nature, and no or low potential cascading effects are anticipated. This level can be managed locally by the respective local government without any external support.

Level 1 is a situation where up to 10 human deaths/missing are reported and less than 100 people are injured, or ill or infected. In this situation less than 100 families (~500 people) may need immediate shelter or food. Many local governments could manage this level of disaster with minimum external support.

Level 2 is a situation where up to 100 human deaths are reported or estimated dead or missing, more than 100 people are injured, ill or infected requiring treatment and care. Up to 500 families (~2,500 people) need immediate shelter and food. An L-2 incident requires the attention of the respective provincial government to support local governments.

Level 3 is a national scale disaster and warrants leadership from provincial and federal government to respond. An emergency could be declared in the disaster affected local governments, provinces or the entire country. Impending consequences may lead to seeking international support.

These disaster categories allow local, provincial and federal governments to immediately assess disasters and take necessary decisions as to whether external support is required and what type of support considering their existing capacity.