

# Monsoon-related Disasters Expose Gaps in DRRM Governance in Nepal

No. 12 | August 2024

## SUMMARY

Nepal is among the countries that are highly susceptible to disasters. Every year, during the monsoon season Nepal suffers huge damages to life and property. Despite prior warnings, substantial damages to life and property raises questions about the effectiveness of disaster preparedness and response by all three tiers of governments. While the Constitution grants each level of government the authority to create disaster risk reduction and management (DRRM) legislations and institutional frameworks, confusion over leadership roles and poor coordination among them continue to hinder effective disaster management.

Nepal's current disaster management practices are primarily focused on post-disaster relief and rescue operations rather than preparedness on risk reduction. International development partners have extended their support on disaster response and planning and policy making, but these efforts are very limited, and the government agencies have not been able to institutionalize such efforts.

While DRRM-related institutions and policies have been in place, their effective implementation, monitoring and evaluation mechanisms remain weak. Major institutional reforms and capacity building initiatives are required at all three tiers of governments to cope with the potential disasters, risk mitigation and response. More importantly, structural reforms are required to enhance the existing

capacity of provincial and the local governments. Along with the exchange of knowledge and experiences, effective coordination and cooperation between intergovernmental agencies will be crucial for effective DRRM governance in Nepal.

## INTRODUCTION

Despite widespread concerns on poor response and inadequate coordination among various government agencies within the three tiers of government after every successive monsoon disaster, the 2024 monsoon season has also proved devastating in terms of human casualties and loss of physical properties. Heavy rainfall during this monsoon was anticipated well in advance. The National Disaster Risk Reduction and Management Authority (NDRRMA) had warned just prior to the monsoon that 83,000 households and 18,00,000 people would face direct impacts in this forthcoming monsoon season. Experts then had warned not just about flooding and landslides, but also about neglected issues like disease outbreaks, snakebites, and contaminated water, common during monsoons.<sup>1</sup> The significant damage, despite prior warnings, has already raised the same questions about whether the three tiers of government, particularly

<sup>1</sup> Poudel, Arjun. 2024. Experts Call for Preparedness to Deal with Monsoon-related Disasters. *The Kathmandu Post*, June 10. Available at: <https://kathmandupost.com/weather/2024/06/10/experts-call-for-preparedness-to-deal-with-monsoon-related-disasters>, accessed on August 25, 2024.

the federal government, were adequately prepared. According to official records, between June 10 and August 28, 2024, 210 people had lost their lives due to floods, landslides and other monsoon-related incidents, with 52 people reported missing, and 272 individuals suffering injuries and 408 houses inundated. At the same time, 2998 houses were damaged with 197 of them completely destroyed.<sup>2</sup> From June 10 to August 8, 2024 NDRRMA recorded 169 incidents of flood, 336 landslides, 228 incidence of heavy rainfall, and 88 lightning strikes. Other disasters, such as fires, storms, animal attacks, wildfires, and snakebites, also occurred, resulting in 19 deaths.<sup>3</sup> According to the Department of Hydrology and Meteorology (DHM), rainfall levels have been higher than average in 2024, with some parts of the country recording the highest rainfall in 77 years.

It is in this context of inadequate response to and preparedness for monsoon disasters, this political situation update sheds light on some of the key issues in Nepal's disaster risk reduction and management (DRRM) governance. The update will include some of the major legal, policy-related and coordination issues in light of varying jurisdictions within DRRM assigned to the three tiers of government by Nepal's Constitution. The update will also assess some of the major policy and institutional reforms needed for Nepal to develop a more robust and responsive DRRM governance in the future.

## DISASTER VULNERABILITY AND DRRM IN NEPAL

Nepal's tectonically active and young mountain range and varied climate make it prone to natural and man-made disasters. The incidence and impacts of disasters are compounded by rapid urbanization, massive expansion of rural road networks without proper planning and environmental considerations, poor land use planning, low income, upstream deforestation, and inadequate preparedness. Monsoon floods and landslides, although

<sup>2</sup> Nepal Police. 2081 B.S. Badhi, Pairo Lagayatka Bipadma Pari Haalsamma 210 Jana ko Mrityu. Available at: <https://www.nepalpolice.gov.np/news/6276/>, accessed on August 29, 2024.

<sup>3</sup> Radio Nepal. 2024. Human Loss on Rise in Monsoon-Induced Disaster: NDRRMA. August 13. Available at: <https://onlineradionepal.gov.np/en/2024/08/13/386590.html>, accessed on August 28, 2024.

predictable, cause significant suffering every year with casualties increasing in recent years. Official records from the last few decades show that epidemics, earthquakes, landslides, floods, fires, and thunderstorms are the main causes of death, with fires, floods, and earthquakes causing the most property damage in Nepal.<sup>4</sup> The 2015 earthquake was the most consequential disaster, resulting in nearly 9,000 deaths, over 22,000 injuries, and the destruction of almost 800,000 homes and heritage sites with about one-third of the population and GDP affected.<sup>5</sup> Nepal has been ranked the 20th most disaster-prone country in the world: 4th in climate change risk, 11th in earthquake risk, and 30th in flood related hazards.<sup>6</sup> From 1971 to 2016, over 21,856 disaster events were recorded, averaging 500 incidents annually. Epidemics have caused the most deaths, making up 41.8 percent of disaster-related fatalities, followed by earthquakes, landslides, and floods. Fire is the most common hazard, with 8,721 reported cases.<sup>7</sup>

The United Nations Office for Disaster Risk Reduction (UNDRR) defines hazards as phenomena that can cause loss of life, property, and service disruptions, which may be natural (e.g., floods, earthquakes, landslides) or human-induced (e.g., epidemics, industrial accidents).<sup>8</sup> In Nepal, disasters are categorized as either "natural" or "non-natural," with the frequency and intensity

<sup>4</sup> UNDRR. 2019. *Disaster Risk Reduction in Nepal: Status Report 2019*. Bangkok: United Nations Office for Disaster Risk Reduction, Regional Office for Asia and the Pacific. Available at: [https://www.preventionweb.net/files/68257\\_682306nepaldrmstatusreport.pdf](https://www.preventionweb.net/files/68257_682306nepaldrmstatusreport.pdf), accessed on August 27, 2024.

<sup>5</sup> Government of Nepal, National Planning Commission. 2015. *Nepal Earthquake 2015 Post Disaster Needs Assessment: Vol. B: Sector Reports*. Kathmandu: Government of Nepal.

<sup>6</sup> Khanal, Beda Nidhi. 2020. Nepal: A Brief Country Profile on Disaster Risk Reduction and Management. ADRC Visiting Researcher, 2019B (From Ministry of Home Affairs, Nepal). Available at: [http://www.adrc.asia/countryreport/NPL/2019/Nepal\\_CR2019B.pdf](http://www.adrc.asia/countryreport/NPL/2019/Nepal_CR2019B.pdf), accessed on August 24, 2024.

<sup>7</sup> Ministry of Home Affairs. 2017. *Disaster Risk Reduction Management in Nepal: Status, Achievements, Challenges and Ways Forward* (National Position Paper for the Global Platform on Disaster Risk Reduction, 22-26 May 2017, Cancun, Mexico). Available at: <http://www.drrportal.gov.np/uploads/document/892.pdf>, accessed on August 24, 2024.

<sup>8</sup> UNDRR. 2020. *Hazard Definition & Classification Review: Technical Report*. Geneva: United Nations Office for Disaster Risk Reduction. Available at: <https://www.undrr.org/media/47681/download?startDownload=20240827>, accessed on August 25, 2024.

of these hazards directly influencing their severity.

The Government of Nepal is committed to the implementation of Sendai Framework for Disaster Risk Reduction 2015-2030 aiming to reduce disaster losses, enhance risk understanding, boost global DRR cooperation, and establish a multi-hazard early warning system in Nepal.<sup>9</sup> Since adoption of federalism, Nepal has prioritized integrating disaster risk management into development planning at the local level. The transition to federalism has also opened opportunities to introduce and institutionalize effective disaster management at all levels. The DRRM Act 2017 outlines the roles of federal, provincial, and local governments with the Ministry of Home Affairs (MoHA) and the NDRRMA leading disaster response, preparedness, and prevention efforts. The Department of Hydrology and Meteorology (DHM) plays a central role in risk analysis and early warning. Despite these efforts, challenges remain in managing disasters effectively across Nepal's federal system. Engaging multiple stakeholders, building capacity, and defining clear mandates for disaster management institutions are essential for meeting the needs of disaster-prone communities and improving national resilience.

## LEGAL AND INSTITUTIONAL FRAMEWORKS ON DRRM

Nepal's DRRM is primarily governed by the Constitution, and other policies and legislations enacted to guide disaster preparedness and response which includes, the Disaster Risk Reduction and Management (DRRM) Act 2017, Local Government Operation Act 2017, National Policy for Disaster Risk Reduction 2018, National Disaster Risk Reduction and Management Regulations 2019, and National Disaster Risk Reduction Strategic Plan of Action (2018-2030) among others. These frameworks guide provincial and local governments in formulating their own DRRM laws and strategies.

The Constitution grants all three levels of government—federal, provincial, and local—the authority to develop DRRM policies, but it lacks clarity on the specific division of these responsibilities. Schedule 8 grants local governments exclusive rights for DRRM, while Schedule 9 shares these responsibilities with federal and provincial governments and local governments. But Schedule 7 also lists DRRM as a shared jurisdiction between the federal and provincial levels. These overlapping mandates contribute to confusion over which level should take the lead in different disaster scenarios.

The Federal DRRM Act establishes several agencies with overlapping roles, such as the National DRRM Council and the NDRRMA, which has complicated coordination and reduced efficiency in preparedness and response. The federal government retains significant authority, including the power to issue directives and declare 'Disaster Crisis Areas,' potentially overriding local government's exclusive constitutional jurisdictions.

The confusion created as a result of overlapping roles and shifting responsibilities are evidenced by lack of preparedness and poor response after major floods and landslides every monsoon season. Despite a promise in 2019 to clarify authority, the DRRM National Council has not yet done so, leaving room for blame-shifting, as seen during recent floods and the COVID-19 crisis.<sup>10</sup> There are institutional structures in place to deal with DRRM in Nepal, however, when disasters occur, new committees are often formed, bypassing the existing structures. During the pandemic, the government bypassed existing DRRM structures and created the temporary Covid Crisis Management Center (CCMC) to collaborate with provincial and local governments, overlooking established disaster management bodies with clear constitutional mandate. The government's reliance on district-level mechanisms over less-capacitated provincial and local bodies also undermines the spirit of devolution under federalism.

<sup>9</sup> UNDRR. 2015. *Sendai Framework for Disaster Risk Reduction 2015-2030*. Geneva: United Nations Office for Disaster Risk Reduction. Available at: <https://www.undrr.org/media/16176/download?startDownload=20240827>, accessed on August 27, 2024.

<sup>10</sup> Gautam, Dhruva. 2022. Nepal's DRRM Policy Landscape: Well on the Way to Making Nepal Ready and Able to Respond to Disasters. *Spotlight*, August 22. Available at: <https://www.spotlightnepal.com/2022/08/22/nepals-drrm-policy-landscape-well-on-the-way-to-making-nepal-ready-and-able-to-respond-to-disasters/>, accessed on August 22, 2024.

Overlapping responsibilities between district and local disaster management committees (DMCs) add to the ambiguities.

## DRRM WITHIN THE FEDERAL CONTEXT

In Nepal's federal system, local governments play a primary role in DRRM due to their proximity to communities, direct accountability, and local knowledge. The Constitution designates local governments as the "first responders" for disasters. This largely aligns with the global frameworks including the Sendai Framework, which emphasizes the importance of local-level disaster preparedness for effective response, understanding the disaster risk, strengthening disaster risk governance to manage disaster risk, and investing in disaster risk reduction for resilience.<sup>11</sup> This is because local authorities have direct access to indigenous knowledge, understand region-specific disaster-related vulnerabilities, and are best positioned to engage with at-risk populations. As the first responders to disasters, local governments play an important role in strengthening the connection between communities and the state, particularly during major disasters.

As evidenced during each monsoon season, local governments currently do not have adequate capacity in several areas on DRRM. These include governance structures, infrastructure, human resources, and essential services. Their ability to prevent hazards, mitigate risks, and respond to disasters is influenced by factors such as geographical vulnerabilities, socio-economic conditions, and existing institutional frameworks. Given Nepal's diverse geographic and demographic characteristics, there is no universal standard for the minimum DRRM capacity required by the local governments. Instead, tailored approaches are necessary for different geographic regions like the mountains, hills, and plains.

<sup>11</sup> UNDRR. 2015. Sendai Framework for Disaster Risk Reduction 2015-2030. United Nations Office for Disaster Risk Reduction. Available at: <https://www.undrr.org/media/16176/download?startDownload=20240827>, accessed on August 20, 2024.

Nepal's proposed DRRM capacity framework for local governments covers several key areas. These include governance, risk and vulnerability reduction, knowledge and education, preparedness and response, and rehabilitation and reconstruction. This model is designed to align with national policies and encourages local governments to integrate DRRM measures into their development plans.<sup>12</sup> While some local governments are beginning to adopt these practices, overall capacity remains limited. This is especially true in areas such as systematic hazard assessment, public awareness, and disaster response infrastructure. Improving these capacities is critical as climate-induced disasters become more frequent and intense.

Provincial governments, which serve as intermediaries between federal and local levels, are in the process of gradually building their DRRM capacities. Their focus includes coordination, facilitation, and monitoring of disaster management efforts. However, like local governments, provinces face significant challenges in establishing the necessary institutional structures and resources. In the absence of clear mandates, their roles are limited to post-disaster relief and cash assistance. The federal government is responsible for overseeing effective DRRM across all levels but also needs to enhance its capacity to address emerging challenges and ensure a coordinated response. The lack of effective coordination between the federal and local governments was blamed for the delay in post-earthquake rehabilitation after the Jajarkot earthquake in November 2023.<sup>13</sup>

Intergovernmental collaboration is vital for an effective DRRM. Coordination between federal, provincial, and local governments often falls short due to institutional weaknesses, bureaucratic delays, and conflicting mandates.

<sup>12</sup> Bhandari, Dinanath, Sanchita Neupane, Peter Hayes, Bimal Regmi, & Phil Marker. 2020. *Disaster Risk Reduction and Management in Nepal: Delineation of Roles and Responsibilities (Summary Report)*. Oxford: Oxford Policy Management. Available at: <https://www.opml.co.uk/files/Publications/a1594-strengthening-the-disaster-risk-response-in-nepal/delineation-of-responsibility-for-disaster-management-summary-english.pdf?noredirect=1>, accessed on August 24, 2024.

<sup>13</sup> Nepallive. 2080 B.S. Rukum-Jajarkot Bhukampa Pachiko Puanirman Garna Sanghiya Sarkar Nai Badhak. January 18. Available at: <https://nepallive.com/story/320811>, accessed on August 28, 2024.

Although the National Council for Disaster Risk Reduction and Management, chaired by the Prime Minister, and the Disaster Risk Reduction and Management Executive Committee, chaired by the federal Home Minister, provide platforms for coordination, they have not been able to prioritize and even out the intergovernmental jurisdictional issues. Strengthening DRRM governance will require increased human resources and a stronger commitment to aligning policies, plans, and actions across the federal system.

## CHALLENGES AND GAPS IN DRRM

Since the adoption of the 2015 Constitution, Nepal has encountered several challenges in transitioning from a centralized to a federalized governance model. A major issue is the inadequate devolution of authority with a weak coordination system, particularly in DRRM. The current disaster management framework primarily focuses on post-disaster relief and rescue rather than proactive risk reduction and preparedness.

Efforts to integrate disaster risk reduction into development planning have been inconsistent. This is due to limited technical capacity and absence of evidence-based approaches, as well as under-prioritization of disaster in overall economic planning across all three levels of government. DRCN's recent study conducted among 24 local units in Nepal in June 2024 found that most of them had established emergency relief funds allocating a small amount of budget annually, while failing to prioritize well planned disaster preparedness, risk assessments, and disaster mapping.<sup>14</sup> Coordination challenges persist at both vertical levels (federal-provincial-local) and horizontal levels (inter-agency). For example, NDRRMA lacks direct mechanisms to coordinate with provincial and local governments and depends on other agencies for critical risk information. The DHM provides risk information, but its communication often fails to reach the most affected communities, and there are no effective feedback systems to improve the process. A broader consequence of this has been a disproportionate

reliance on the non-governmental sector with primarily international development partners having to push for disaster-responsive planning and policies across different tiers of government.<sup>15</sup>

Local and provincial governments often lack the capacity, resources, and integrated plans needed to manage local risks effectively. These shortcomings were highlighted during the 2015 earthquake, which exposed the country's limited ability to respond to large-scale disasters, revealing deficiencies in equipment, training, and coordination.

### Case Study

#### Thame Flood a Major Warning for GLOF in the Himalayas

On August 16, 2024, a sudden flood hit the Thame River in Ward-5 of Khumbu Pasang Lhamu Rural Municipality, Solukhumbu at around 1:30 PM. The area includes six glacial lakes downstream. Recent weather data from DHM showed above average rainfall over the previous week, and more notably, increased average daily temperatures from 9.7°C to 11.0°C by August 9. DHM's preliminary assessment identified the sudden flood due to a Glacial Lake Outburst Flood (GLOF).<sup>16</sup> Experts believe that this type of flood occurs when a glacial lake bursts, releasing a large volume of water often triggered by heavy rainfall. At 5:10 PM, the flood monitoring station in Khotang, about 82 km downstream from Thame, recorded a rapid water level rise of 1.20 meters, reaching 5.53 meters by 5:40 PM. While DHM ruled out sustained major risks, it still advised residents downstream to stay alert and sent out 142,000 SMS urging vigilance.<sup>17</sup> More than one billion rupees was damaged by the flood.<sup>18</sup>

With Nepal's Himalayan glaciers facing severe risks from global climate change, the Thame potential GLOF serves as a troubling reminder for DRRM authorities in Nepal, putting in sharp focus the urgent need for improved planning, preparedness, and long-term strategies to manage and prevent similar unforeseen disasters in the future.

<sup>15</sup> DRCN. 2024. *Local Government Functions in Health Agriculture, Livestock and Disaster Management*. Lalitpur: DRCN.

<sup>16</sup> Department of Hydrology and Meteorology. 2024. Solukhumbu Jilla ko Khumbu Pasang Lhamu Gaunpalika 5, Thamema Aayeko Badhi Sambandhi Parambhik Janakari 2081/4/32. Available at: [https://www.dhm.gov.np/uploads/dhm/downloads/Thame\\_Flood\\_Solukhumbu\\_16\\_August\\_Information.pdf](https://www.dhm.gov.np/uploads/dhm/downloads/Thame_Flood_Solukhumbu_16_August_Information.pdf), accessed on August 27, 2024.

<sup>17</sup> Department of Hydrology and Meteorology. 2024. Solukhumbu Jilla ko Khumbu Pasang Lhamu Gaunpalika 5, Thamema Aayeko Badhi Sambandhi Parambhik Janakari 2081/4/32. Available at: [https://www.dhm.gov.np/uploads/dhm/downloads/Thame\\_Flood\\_Solukhumbu\\_16\\_August\\_Information.pdf](https://www.dhm.gov.np/uploads/dhm/downloads/Thame_Flood_Solukhumbu_16_August_Information.pdf), accessed on August 27, 2024.

<sup>18</sup> Anasari, Gani. 2024. Himpokhari Phutera Solukhumbuma Akasmat badhi Ayeko 'Anuman', Ek Arba Rupiyabhanda Badhiko Ksheti. *BBC News Nepali*, August 16. Available at <https://www.bbc.com/nepali/articles/c4gl20mjlpvo>; accessed on August 24, 2024.

<sup>14</sup> DRCN. 2024. *Local Government Functions in Health Agriculture, Livestock and Disaster Management*. Lalitpur: DRCN.



The COVID-19 pandemic further exposed the weaknesses in Nepal's DRRM approach, showing the risks of focusing on single hazards rather than adopting multi-hazard strategies.<sup>19</sup> Effective resilience would require the ability to manage multiple crises simultaneously. While discussions on multi-hazard responses are just beginning, they are becoming increasingly important both in Nepal and globally. Although institutions and policies are in place, the mechanisms to implement, monitor, and assess their effectiveness are still weak. Urgent reforms and capacity building are needed across all levels of government to better prepare and respond to multiple disaster risks that Nepal is exposed to every year.

## THE WAY FORWARD

Given Nepal's high risk disaster profile, and the gaps in DRRM discussed in the previous section, Nepal's path to building resilience requires a comprehensive and inclusive DRRM strategy. This strategy should focus on early actions and investments based on risk information. As climate change leads to more frequent and severe disasters, as evidenced by the recent potential GLOF in Thame of Solukhumbu, it is crucial to move from reactive responses to proactive, multi-hazard approaches that are not only essential for protecting development gains but are also more cost-effective and sustainable in the long term. Involving local communities, especially marginalized and vulnerable groups, is critical for effective disaster management given Nepal's geographic, socio-economic and climatic diversity. Official numbers suggest that Dalits and indigenous people are disproportionately affected by monsoon-induced disasters: 48 Dalits (28.2% of total deaths) and 71 people from indigenous groups (41.7% of total deaths) had died due to monsoon-related hazards by the third week of August 2024, compared to their respective population proportions of 13.5 percent and 36 percent.<sup>20</sup> These groups are often excluded from

meaningful participation around DRRM governance, with their involvement limited to token roles. Disasters frequently result from decisions made without fully considering the realities faced by those most at risk. To address this, governance structures must actively engage with communities to understand and incorporate their needs. Resilience-building efforts should be based on local knowledge and must respond to the specific needs of each community. Under the federal governance, local governments are ideally situated to address the needs of diverse communities in planning to better respond to disasters.

Strengthening collaboration among government agencies and private sector and civil society stakeholders is also vital. Implementing the DRRM Act within Nepal's federal system remains challenging, particularly in effectively devolving authority, and coordinating efforts across different government tiers. Effective multi-stakeholder engagement will therefore require clearly defining the roles of DRRM agencies and aligning their responsibilities with available resources.

The capacity of local and provincial governments must be greatly improved to ensure effective DRRM governance. Local Disaster Risk Reduction and Management Committees (LDMCs) in all 753 local units need better equipment and connections to real-time early warning systems. Provincial governments should enhance their understanding of DRRM and support local preparedness and response efforts. Addressing multi-hazard risks and promoting preventive actions at all government levels should be a priority.

Key reforms should include updating the institutional framework to clarify roles among the three government tiers. Improving disaster preparedness through better logistics, expanded emergency operation centers, and enhanced early warning networks is crucial. The government's plan to develop a strong community-based

<sup>19</sup> Khatakho, Rajesh et al. 2021. Multi Hazard Risk Assessment of Kathmandu Valley Nepal. *Sustainability*, 13 (10): 2-27. Available at: <https://www.mdpi.com/2071-1050/13/10/5369>, accessed on August 27, 2024.

<sup>20</sup> Sunar, Pabitra. 2024. Dalit and Indigenous Communities more Vulnerable to Monsoon-induced Disasters. *MyRepublica*, August 25.

Available at: <https://myrepublica.nagariknetwork.com/mycity/news/dalit-and-indigenous-communities-more-vulnerable-to-monsoon-induced-disasters>, accessed on August 25, 2024.

disaster management program and improve data systems for effective disaster planning is essential. By promoting subnational collaboration and cross-learning, Nepal can

advance its DRRM efforts and prepare and respond to disasters better in the future.



Founded in 2014, Democracy Resource Center Nepal (DRCN) is a national non-governmental organization dedicated to the study and research of social and political issues. Since its establishment, DRCN has consistently undertaken in-depth and evidence-based research into various aspects of Nepal's transitional political landscape, including the implementation of federalism, local-level restructuring, and election observation. The outcomes of these studies are shared with stakeholders, fostering discussions and debates. DRCN's overarching objective revolves around advancing efficient governance within Nepal's federal framework through these rigorous research endeavors and thoughtful discourse.



**Democracy Resource Center Nepal**

**Kupandole, Lalitpur, Nepal | Tel: +977-1-5902286**

[info@democracyresource.org](mailto:info@democracyresource.org) | <https://www.democracyresource.org/>