

7 JAJARKOT EARTHQUAKE 2023

An Analysis of Rescue, Relief and Early Recovery

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Acronyms and Abbreviations

DDMC	District Disaster Management Committee
DEOC	District Emergency Operation Center
DPNet	Disaster Preparedness Network
DRR	Disaster Risk Reduction
LDCRP	Local Disaster and Climate Resilience Plan
LDMC	Local (Municipal) Disaster Management Committee
LEOC	Local Emergency Operation Center
LG	Local Government (Rural Municipality / Municipality)
MoFAGA	Ministry of Federal Affairs and General Administration
MoHA	Ministry of Home Affairs
NBC	National Building Code
NDRRMA	National Disaster Risk Reduction and Management Authority
NEOC	National Emergency Operation Center
NRCS	Nepal Red Cross Society
OPMCM	Office of Prime Minister and Council of Ministers
PEOC	Province Emergency Operation Center
RM	Rural Municipality
SitRep	Situation Report

Acknowledgement

After the catastrophic earthquake in Jajarkot, the DPNet swiftly dispatched a team to gather firsthand information from day one. Despite the ongoing risks of aftershocks, limited accommodation, and basic amenities, the seven-member team, under the leadership of Bishnu Timilsina, demonstrated remarkable courage. They navigated various locations, collecting essential data in support of Mercy Corps and Start Fund. These reports were disseminated through social networks and mass emails, aiming to inform a wide range of stakeholders about the on-ground situation and identify potential intervention areas.

Our daily updates have been instrumental in supporting both governmental and non-governmental entities in planning their relief and humanitarian efforts. Subsequently, with Plan International's support, we regularly published a quad-day situation analysis report for another two months. Currently, DPNet on its own produces bi-monthly situation analysis reports, which will continue as long as they remain relevant.

In collaboration with FCDO, Start Fund and Mercy Corps, we have decided to compile this report as a comprehensive reference document. It primarily includes information from the Jajarkot Earthquake Situation Analysis Report, supplemented by other secondary sources.

I extend my heartfelt gratitude to FCDO, Start Fund, Mercy Corps, and Plan International for their prompt support in mobilizing our team. I also commend the initial efforts led by Bishnu Timilsina and subsequently by Ram K. Gurung, as well as the dedication of all team members. A special thanks to the DPNet family and staff for their continuous support. I would like to acknowledge Ram Prasad Bhandari, Ram K. Gurung and Nishan Kumar Aryal for their significant contributions in shaping this report. Special thanks go to Nishan Kumar Aryal for his contribution in graphic designing of this report.

Special recognition is due to the Vice-Chair of DPNet, Dr. Raju Thapa, for his tireless efforts in gathering information, editing the situation reports, and refining this report.

It is our hope that this report will serve as a valuable record of the Jajarkot earthquake response and as a resource for preparing for future disasters, learning from our experiences.

Thank you,

Surya Bahadur Thapa

Chairperson/ DPNet

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Executive Summary

This report aims to analyze and synthesize the initiative of DpNet Nepal in collaboration with Mercy Corps Nepal and PLAN International Nepal to bring up the situation analysis report series. DpNet mobilized a 7-member multidisciplinary team to Jajarkot and Rukum on November 4 and produced a situation report series. After preparing and disseminating SitRep for 7 consecutive days, the strategy was changed to producing biweekly SitRep until 14 January 2024. This report is prepared mainly based on those SitRep. Other references utilized were various online media reporting, reports produced by other organizations, policy decisions made by the different level of governments, and existing policy provisions to come up with recommendations not only for addressing this disaster but also to contribute to the overall DRRM of Nepal.

The earthquake of 6.4 local magnitude hit mostly the areas of Jajarkot and Rukum West districts on November 3, 2023, at midnight (23:47 hours Nepal Standard Time). Other 11 districts have also had some level of effects. Altogether, 154 people died due to collapsed houses, and 366 were injured. Initial assessment revealed a total of 62,012 private houses, 626 school buildings and 50 government buildings either destroyed or partially damaged and 250,000 people affected. The estimated loss from agriculture, livestock and poultry is around NPR 42.9 million and 480 MT of wheat and mustard lost at the field. The initial estimate for reconstruction needs prepared by NDRRMA is NPR 69 billion. Local communities, security forces, medical institutions and government authorities had swift search and rescue operations. Despite the geographical constraints of road access, scattered settlements and houses, midnight time, the local people, LGs elected leaders and local-level security and medical personnel performed a commendable job and mostly completed the search and rescue operation within 24 hours.

Government authorities have announced several relief policies. As in previous disasters, relief assistance has been provided from every corner of society both at individual and organizational levels. Relief distribution concluded with some challenges due to gaps in demand and supply, transportation difficulties in interior rural areas, and some confusion or inefficiency created by the one-door relief distribution policy. In some areas a cash voucher system was practiced, but not on a large scale. As the market was functioning fairly, a cash system would have been effective in addressing the distribution challenge such as appropriateness of relief materials, quality of relief materials distributed and efficiency. The insurance premium for disaster risk administered by the Karnali Provincial Government has also been under payment from the insurance company. The government emergency relief amount, the amount provided to the family of deceased members, and the cash grant for temporary shelter construction are expected not only to facilitate acquiring the needy materials by the affected households but also to contribute to revitalizing the local economy.

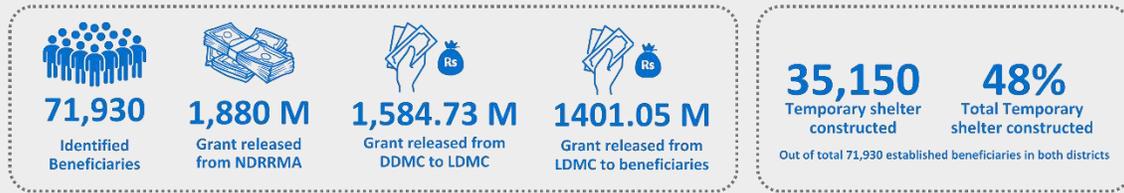
In parallel with the relief operation, policy provisions were made in time and temporary shelter construction was initiated by government authorities, local people themselves, and volunteers mobilized by the political parties. Despite those timely decisions and volunteerism, the temporary shelter construction was delayed against the initial plan. Addressing the early needs related to the WASH sector, equipping the local health institution, establishing temporary learning centers, conducting psychological counseling, working for winterization packages, and addressing the special needs of most vulnerable people such as pregnant women, lactating mothers, children, senior citizens, people with disabilities, and people with chronic diseases were the most critical need and were also addressed, but with several challenges. Particularly, the winterization support combined with the delay in temporary shelter construction took lives of over 32 vulnerable people.

Initial planning has been ongoing for the reconstruction at the federal level. Initial estimates floated by the NDRRMA show a need of NPR 69 billion for the reconstruction of private houses, public buildings, and physical infrastructures. The development partners have shown readiness to support the reconstruction in a meeting organized by the ministry of finance. The Karnali Provincial Government has unveiled an agriculture and livestock based comprehensive livelihood restoration program. All these good initiatives need detailing, and implementation duly incorporating the learning from 2015 Gorkha Earthquake reconstruction process. The federal government has started a feasibility study to make all the buildings insured for risk sharing, which is although a belated action after facing the 2015 Gorkha Earthquake, is still a needed initiative for long-run DRR measures. Preparation and implementation of functional preparedness plan throughout the country, enforcement of the National Building Code, inclusion of DRM courses in school education and massive awareness campaign with simple but heart-touching messages to all the people are the important tasks to be planned and implemented without any delay. Who knows when another area will be hit by the earthquake? It is well said that earthquake does not kill people, but our poorly constructed houses and other physical infrastructures kill us.

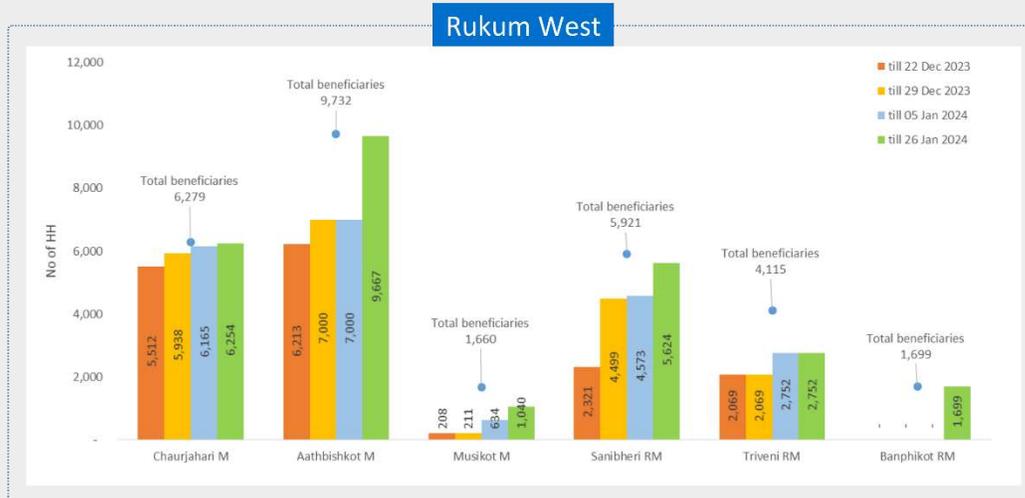
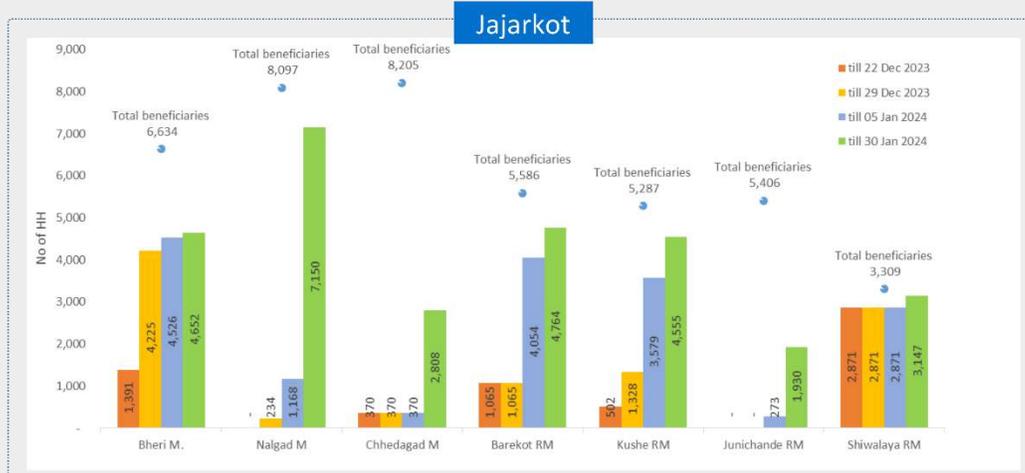
Some of the recommendations that need to be taken into account, which can be useful for future disaster management efforts, are as follows: Firstly, a unified, legally binding form should be implemented to comprehensively track disaster relief activities. This form would detail participants in relief efforts, their actions, and the where, when, and why of these actions, enhancing coordination, transparency, and accountability. The government's One door policy, particularly in cash distribution, needs more clarity with detailed guidelines for effective implementation. This policy should have a hierarchical structure, scaling from district to provincial and federal levels, depending on the disaster's reach. To ensure equitable assistance distribution, humanitarian partners should be encouraged to expand relief efforts beyond their usual areas, and the government should allow Social Security Allowance accounts for receiving grants. Additionally, continuity in assistance distribution must be maintained despite administrative changes and struggles within DAO and LGs should be addressed by higher authorities to promote collaboration.

Further recommendations include the need for a robust system to foster coordination among humanitarian agencies, preventing duplicated efforts. The approach to assistance distribution should be reviewed, considering varying levels of vulnerability, and ensuring that remote areas are not neglected. Establishing warehouses in each district, especially in mountainous and hilly regions, would significantly improve disaster response capabilities. The Disaster Assessment Guideline should be updated to include MIRA and CSDA for a more effective evaluation of disaster impacts. It is also crucial to ensure the accuracy of local-level data and hold elected representatives accountable for presenting inflated beneficiary figures. Addressing geological risks in rebuilding efforts, including land fissures due to earthquake, is essential. Furthermore, the impact of disasters on livelihoods should be comprehensively assessed, and special care must be provided to vulnerable groups, such as pregnant, lactating women, PWD, injured individuals with dependent children. Ensuring compliance with minimum humanitarian standards in relief support and providing psychosocial support to orphaned children and bereaved parents are also vital. Lastly, advocating for disaster-resilient construction practices and monitoring the inflation of local materials and labor costs, along with providing technical training to local masons, are critical steps to build a more disaster-resilient future.

Jajarkot earthquake in a glimpse



Local government's efficiency in Temporary shelter fund disbursement



Introduction

Background and Context

On November 3, 2023 (2080-07-17 B.S.), at 23:47 hours, an earthquake of 6.4 ML (local magnitude) hit multiple areas of Jajarkot and Rukum West districts of Karnali province. The epicenter was identified near Ramidanda of Barekot Rural Municipality, north of Khalanga, the district headquarters of Jajarkot district. The main shock was followed by numerous aftershocks including a strong shock of 5.8 ML on November 6, 2023. Both the main shock and the strong aftershock were also felt in Kathmandu, the capital city of Nepal. The earthquake caused serious losses of lives and property with 154 deaths, 364 injured.

Nepal is a disaster-prone country exposed to earthquake and hydro-meteorological hazards including others. Several initiatives are ongoing from both the government, development, and humanitarian agencies to reduce disaster risks and manage the disasters, especially for the last decade. The response capacity has been improved, but the efforts are found inadequate for preparedness leaving far behind the institutionalized efforts for mitigation and disaster risk reduction.

There have been several efforts ongoing to respond to this earthquake disaster from every corner of society. In this context, it is worth watching closely the after-effect of a disaster event, analyzing, and documenting the initial phase of response and early recovery to inform the stakeholders for addressing the disaster risk reduction and management measures in an improved way.

Objectives

The main objective of this report is to document a comprehensive picture of the Jajarkot earthquake covering the search and rescue, relief, and early recovery phase of the response. The specific objectives are as below:

- Review the situation analysis report series produced by DPNet.
- Analyze the observations and comments reported in the media.
- Review reports and databases produced by government and other agencies.
- Prepare a consolidated report including conclusions and recommendations relevant to addressing the future course of this disaster and overall DRRM in the country.

Methodology

The report is based on secondary data sources and is primarily qualitative data based. The government authority-published quantitative data has been used as far as available. DPNet Nepal has published a series of situation analysis reports right from Day 1 of the disaster event. It mobilized a multi-disciplinary team to the affected area on November 4 for field data collection. The team visited several areas, had its observations, and interacted with different stakeholders including LG officials, district authorities, affected people, community leaders, etc.

Similarly, there are press releases, and damage and losses database, relief operation and temporary shelter construction updates from local, provincial, and federal government authorities. Nepal Red Cross Society has published the initial rapid assessment (IRA) reports. Other organizations have also published several reports. Media has extensive coverage. All these sources have been reviewed including key relevant policy provisions and plans to analyze the situation on the pretext of existing policies and plans.

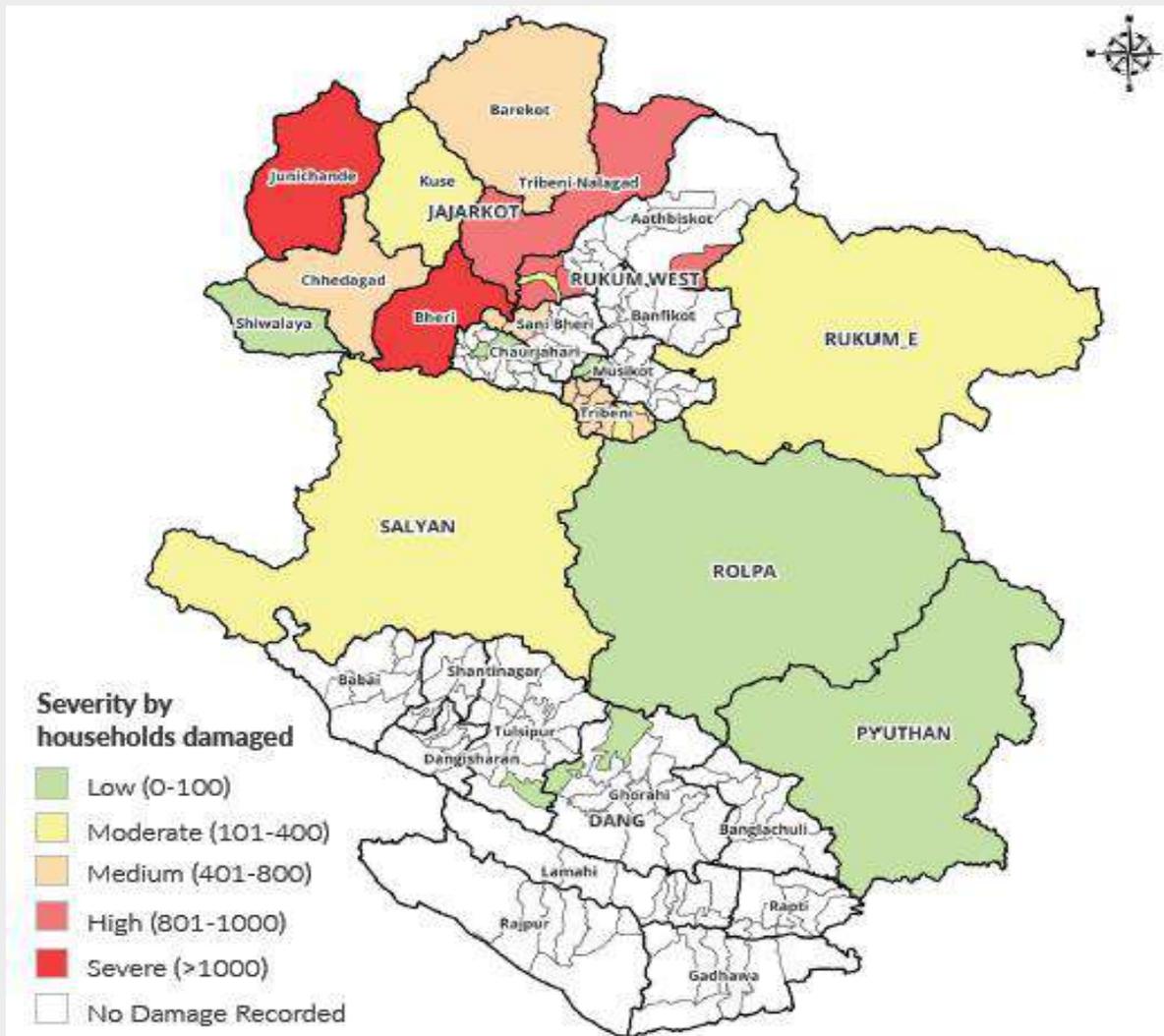
Scope and Limitation

As explained in the methodology, the analysis and report are principally based on secondary data sources. The report covers a period of approximately 2.5 months. All the situation analysis reports prepared by DPNet, the decisions made by, and the database managed by the government authorities, media reporting are the sources of information. The observations and views presented may not represent the complete perspective of all the affected geography, people and the stakeholders involved, as the field data collection was not based on sampling technique.

Damage and Losses

Affected Areas and Population

National Emergency Operation Center (NEOC) reporting showed that all together 13 districts have encountered some level of damage. The most affected districts are Jajarkot and Rukum West. The map of the affected areas is presented in figure below:



Source: NDRRMA

Human Casualty

Together 154 deaths and 364 injuries, comprising 81 children and 73 adults. In terms of gender distribution, there were 84 female and 70 male fatalities. The occurrence of the earthquake at midnight (23:47 hours), the existence of weaker low-strength masonry houses and people going back to their home district to celebrate the Dashain festival were the major causes of huge human losses. Although the damage and losses from the earthquakes did not have a linear relationship with earthquake magnitude, the 6.3ML earthquake of Bajhang on October 3, 2023, had just one death and 30 injured justifies the major cause of the earthquake time and no recognizable foreshock before the main shock. In Bajhang's case, the earthquake



occurred during daytime at 15:06 hours with a foreshock of 5.3 ML 26 minutes in advance (at 14:40), thus helping people go outside of their houses and schools. The single death was also from the landslide. In Jajarkot earthquake, more than half of the total 154 deaths, the majority constituted children (53%). Similarly, the death of female was 55%. The children's deaths could be because of their deep sleep at midnight and their inability to run away on their own. Similarly, the



Photo: Annapurna express.

greater number of women deaths could be because many male members are working abroad and women, they tried to save life and property during earthquake time.

Agriculture and Livestock Losses

The Karnali Provincial Government disclosed the extensive agricultural and livestock losses incurred. The total financial impact amounted to NPR 42.9 million, in addition to the loss of 480 metric tons of wheat and mustard crops. The breakdown of losses includes a casualty count of 513 livestock, leading to a financial setback of NPR 25.2 million. Furthermore, 152 households engaged in beekeeping suffered damages, resulting in a financial loss of NPR 13.9 million. The destruction of 192 hectares of wheat and mustard crops accounted for the loss of 480 metric tons. Additionally, 88 metric tons of stored grains were buried, with a corresponding value of NPR 3.8 million. These significant losses highlight the challenges faced by the community, emphasizing the urgent need for effective restoration efforts.



Building Damage

A huge number of buildings – private houses, government buildings and schools were damaged. Altogether, 62,012 private houses, 626 school buildings and 50 government buildings have been damaged. data shows that the majority of private house damage has occurred in Jajarkot (55.64%) followed by Rukum West (42.78%) districts. Interestingly, Rukum West has reported the majority of the houses fully damaged. The preliminary damage data is based on the initial reporting from LGs and their classification of the damage level. It needs detailed technical verification, as there is the likeliness of data exaggeration as experienced in the 2015 Gorkha Earthquake and also reported for the Bajhang Earthquake, 2023. The earthquake has damaged 54 police offices in Karnali province. DIG Bhim Prasad Dhakal reported that structures from district police offices to temporary posts were affected. 33 police buildings in Jajarkot, 12 in Rukum West, three in Salyan, four in Jumla, and two in Kalikot suffered damage. In Jajarkot, four District Police Office buildings and various other police posts were dismantled. Rukum West also faced significant damage to police offices. DSP Santosh Roka noted seven out of eight buildings in Khalanga, Jajarkot's district headquarters, were unfit due to cracks. Tents are now being used for daily police operations and accommodation. (Source: <https://myrepublica.nagariknetwork.com/news/jajarkot-earthquake-destroys-54-police-offices-police-resume-daily-works-from-tents/>)



Data Source:
NEOC (as of Nov 17, 2023),
School building - UNICEF
Livestock - DpNet 51tRep#7

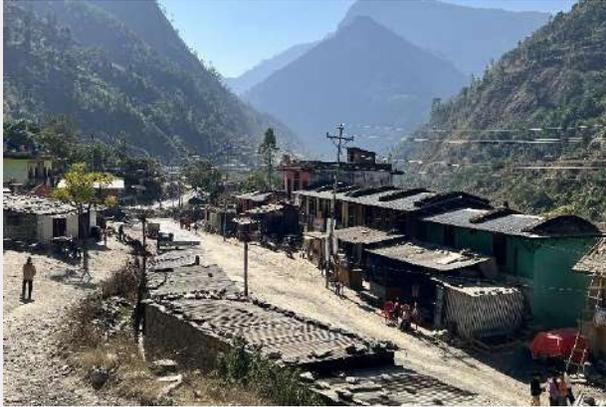


Infrastructure Damage

Water, Sanitation, and Hygiene (WASH) is another major sector that has been highly affected. Karnali Provincial WASH cluster meeting informed that over 100 drinking water supply infrastructures have been damaged and require repairment. The water supply has been disrupted due to damage to the water infrastructure. Inadequate sanitation facilities for the displaced families living in the tents have affected their health conditions. The health institutions and the affected families have been mentioning the increased cases of water-associated diseases like diarrhea. Cracks on black-topped roads and obstruction of roads due to landslides were reported but on a minor scale. The roads were already restored for operation. The damage to water supply infrastructures including the toilets have posed a serious threat of secondary disaster in terms of waterborne diseases. Already, the cold, lack of clean and safe water and proper sanitation have increased the number of patients with diarrhea, fever and cough as informed by local health institutions.



Market and Lifeline



Electricity supply was restored within 10 hours after the disaster. However, the electricity supply was purposefully cut down to the collapsed buildings and the vicinity areas for safety reasons. On day 2, the electricity supply was restored in those cutdown areas as well. Nepal Electricity Authority provided free electricity connection in the tents and shelter camps on November 10, 2023 (i.e., Day 7). The electricity was disturbed on the night of November 10, when the affected areas faced challenges from rainfall.

The market remained closed on day 1, Saturday. The hotel and restaurant business continued to operate, and the market resumed on Day 3 (November 6) with stable prices. It shows that most of the business enterprises were operating from relatively safer buildings.

Other Sectoral Losses



Various means of livelihood such as livestock, poultry, and beehives were damaged. In the Maide settlement of Bheri Municipality Ward 1, beekeeping was one of the major income sources of the farmers, which have been damaged by the earthquake. Traditional food and seed storage such as Bhakari was damaged and recovering food grains from the destroyed houses was not possible. Moreover, the recovered grains also faced problems of getting damaged due to the November 10 rainfall.

The education sector is another sector that has a huge effect of the earthquake. UNICEF reported that the damage has been caused to 626 school buildings thus affecting over 132,000 school-going children. The school-going children remained out of the learning environment and were also living with the fear of earthquake shocks. The building from where Radio Samaweshi Awaaj 102 Megahertz was operating was damaged. Now, the radio is broadcasting from a make-shift tent.

The telephone and internet facilities were in operation, but later on faced frequent disruptions and breakdowns. It could be because of the heavy traffic. DDMC Jajarkot was the most sufferer. The box below presents a story of the victims underlying the importance of communication means and issues to be considered.



Although Nepal Telecom offered free mobile services in the after-effect of the earthquake, Dipa Shah, a resident of Aathbishkot Municipality had a shocking experience. She got trapped beneath the rubble of her collapsed house and tried to call for rescue, but her mobile was without a credit balance. Fortunately, she received a call from her daughter which helped rescue her. It is a learning revealing how vital is communication access to save lives; equally a message to the telephone operators that immediately after the disaster event it is urgent to free up calls without any restriction of credit balance or due to be paid.

Accomplishments and Challenges

In the aftereffects of a disaster search and rescue, medical care, relief distribution are the key priority actions followed by early recovery and long-term reconstruction and recovery. The response timeline has been summarized and presented in Annex 2. This section attempts to present cursory highlights of the actions, achievements and challenges covering 2.5 months after the earthquake. The reporting period chosen signifies the additional one month from the federal government’s plan to complete the temporary shelter construction.

Search and Rescue

Surviving family members, neighbors, LG representatives and most importantly the security forces were engaged in search and rescue actions immediately after the earthquake. Despite the constraints of electricity cut-off, inadequate transport means, poor road networks, unavailability of trained community volunteers and inadequate search and rescue efforts were commendable. Security forces and medical personnel were immediately deployed despite the effects of the earthquake on their facilities. Chief District Officer of Jajarkot district said that immediately after the earthquake a meeting with all security forces was organized and mobilized for search and rescue operation.

Area police office, Nalagad in-charge Inspector Madhav Chaudhary said that they started rescue operation immediately after the earthquake mobilizing available police cadres with motorbikes. Mr. Chaudhary further said that they could have saved many lives, had they had the vehicle. Mr. Pahal Singh Gharti, Ward – 8 Chairperson of Sani Bheri RM said, “Community and LG’s proactiveness saved many lives”. (*onlinekhabar.com; November 4, 2023*)



Photo: Setonati

The Nepal Army had mobilized 5 helicopters and an aircraft for rescue operations and distribution of relief



Photo: Onlinekhabar

materials. NEOC reported that all together 1,631 security personnel (Nepal Police – 843, Nepal Army – 502 and Armed Police Force – 286) were mobilized. In the early morning of November 4, the Prime Minister visited the affected areas together with a medical team of 41 personnel as a backup force. The medical team consisted of personnel from various security forces and Bir hospital. Similarly, the Lumbini provincial government sent a team of 25 medical officers to support them. NRCS,

along with over 90 volunteers was actively engaged in rescue and relief operations.

While the prime minister was in the affected area, the home minister called a meeting of security forces and key government officials and decided to release NPR 100 million to Jajarkot and Rukum West DDMCs for rescue and relief operations.

The search and rescue operation led by the security forces were carried out efficiently in light of the logistical and geographical constraints. The security forces completed the search and rescue operation within 24 hours of the earthquake. However, more injured could have been saved had the community volunteers envisioned in policy had been formed, trained, and provided with minimum level of equipment. Similarly, had the security forces and medical institutions of affected areas been made more resourceful in terms of human resources, training, and logistics, more lives could have been saved.

Medical Response

1.1.1 Rescue, Treatment and Dead Body Management

The rescued victims were treated at local health institutions and immediately taken to the better-off hospital in Surkhet, Nepalgunj through ambulances or other means of transportation. On the next morning, the Nepal army helicopter lifted the injured to Surkhet, Nepalgunj and Kathmandu. The National Trauma Center and Bir Hospital in Kathmandu were put on standby position to receive and treat any injured victims. The protocol of hospitals for referral was established and followed to manage the complexity of treatment level. Postmortem of the deceased was efficiently conducted with the available facilities at the local health institutions.



A demonstrated commitment was shown in Nalagad area. As there were several deaths in the area, taking the bodies to the local hospital for post-mortem was not possible. To solve the problem, the medical doctor and police team reached the village and conducted an on-site postmortem. The medical officer, Dr. Bishal Upreti, working at Nalagad primary health post said “I went to ward number 1 and performed postmortem of 22 bodies. Dr. Upreti shared his experience saying that only a few injured patients were brought to the hospital during nighttime, the pressure of bringing patients increased only after 4 AM of November 4. As said by Dr. Upreti many deaths were due to not receiving treatment on time (*onlinekhabar.com dated November 5, 2023*).



The government has initiated a vaccination campaign against measles, rubella and typhoid in the earthquake affected districts starting from 28 December 2023. Children aged 6 months to 15 years received the measles-rubella vaccine, whereas everyone between 16 to 45 years got the typhoid vaccine. Good progress was reported as 140,891 people received vaccination in Jajarkot district. The measles-rubella and typhoid coverage reached 99% and 88% respectively. Similarly, establishment of health camps, distribution of medicines, emphasizing on safe water, sanitation, and

hygiene practices, and continuously warning on diarrhea and cholera were found effective to protect the affected people from such secondary disaster leaving exception to cold-related deaths.

The harsh winter and delay in the construction of temporary shelters has caused an increase in cold related patients. Already, 36 people died with the complications associated with cold and in an average 400 patients across Jajarkot district visit the health institutions on daily basis. The medical institutions are also facing scarcity of essential medicines mainly due to the delay in procurement. Shortage of medicines caused problems for treatment of diseases like fever, typhoid, pneumonia, diarrhea, and asthma. The municipality has recently intensified the tendering process to procure the medicines. A dissatisfied public with the shortage of medicines has stopped visiting health institutions. Similarly, some of the health institutions have been facing problems due to the shortage of x-ray machines, power back up and beds.

1.1.2 Psychosocial Counselling

Some efforts are ongoing for psychosocial counselling, but it has become a challenge to conduct massive counselling. Especially, the children who lost their parents or close relatives are in special need for counselling support. In the post-earthquake scenario, notable challenges were observed in the academic landscape. Many students either remained absent or display disinterest, often skipping classes or leaving during recess. Their reluctance seemed to be coming from lasting fears related to their earthquake experiences. To address these concerns, school authorities intermittently invited psychosocial counselors from hospitals. Sweta Adhikari, a psychosocial counselor from CMC Nepal shared that at Tribhuvan Secondary School, Bheri Municipality, some students in higher grades have begun exhibiting convulsive disorders, prompting the request for counselor intervention. Periodically, teams of counselors visited schools to screen students for any emerging issues and provide necessary support upon identification.



Photo: CMC Nepal

1.1.3 Relief Operation

The relief operation was district-centric following the one-door policy. As there were no stocks the distribution relied on support coming from outside the districts. Relief materials from outside started reaching the affected districts from Day 2 (November 5). At first, the District Emergency Operation Centers (DEOCs) received the relief materials, had stock entry, and then dispatched to the LGs as per their demand. Jajarkot DEOC had both paper-based and electronic stock entry systems thus facilitating visualization of the stock quickly. Rukum West could manage only paper-based entry. Some of the relief-supplying organizations directly sent the relief materials to the LGs and LGs made an entry and informed the DEOC. The staff members working at the DEOC were found exhausted because of the workload and no backup support provided either from the provincial government or I/NGOs for that work.

Mostly the relief distribution for both food and non-food items were in kind. In some cases, cash-voucher was also practiced at a minimal level. Some organizations providing relief items were delivering the materials directly to specific locations for efficient distribution. However, the district authorities faced the

problem of transporting the relief materials collected at district headquarters in the needy areas promptly because of the poor road networks, funding for transportation, etc.

As part of the emergency relief support, a family with 5 members was provided NPR 15,000 and a family of more than 5 members NPR 20,000. Similarly, NPR 200,000 per deceased to the family with an additional NPR 100,000 for additional deceased from the same family was another cash relief support provided by the government.

Days after the disaster event passed, the food supplies were noticed fairly adequate and stable medical



services, but the need for shelter and warm clothes were heightened. The challenges faced were delay in reaching the relief items to the affected families because of several reasons including the transportation problems to the remote areas and burdensome one-door policy. As the market was functional, the cash-based or voucher-based system would have been an applicable and efficient method to avoid the transportation issue, or the concerns related to the appropriateness of relief materials distributed and the quality of relief

items.

Several issues, concerns, and challenges emerged during the response to the disaster. While some relief organizations were prepared to deliver materials to LGs after stock entry at the district administration office, others faced difficulties due to a lack of budget for internal transportation. The transportation problem was particularly pronounced in delivering assistance to interior rural areas, necessitating the use of tractors and, in more remote locations, helicopters. District administration office authority emphasized the need for comprehensive package support instead of individual items for more effective distribution.

Concerns were raised by affected people regarding delays in receiving relief materials and allegations of biased distribution by elected leaders. Also, households belonging to tenants and squatters initially did not receive assistance as their names were not included in the victim list, but the issue was later addressed. Quality issues were observed in some distributed food relief materials, and the consolidation of all relief items in one location made it challenging to locate Water, Sanitation, and Hygiene (WASH) materials during distribution. Although district-level Disaster Preparedness and Response Plans (DPRPs) outlined humanitarian standards for relief materials, their practical application was not consistently observed. Some LG leaders and social actors complained about the inefficiency of the one-door system adopted by district authorities, citing it as a hindrance to effective and timely relief distribution. These challenges emphasize the need for coordinated efforts and improved mechanisms to address issues in disaster response and relief distribution.

1.1.4 Make-Shift Shelter

Immediately after the earthquake tents and tarpaulins were distributed for managing the make-shift shelters. There was inadequate supply in comparison to demand thus making the timely distribution problematic. It forced the affected families to spend nights under the open sky. Authorities were facing problems in

distribution because of the demand-supply gap. For example, the demand from some LGs was for 500 tents, but the DEOC could only provide 100 considering the stock situation. In such a situation, the situation ward chairperson just holds the 100 pieces rather than going for distribution and creating conflict among the affected people. On the one hand, the supply of tents and tarpaulins didn't match the demand, making a problem for the responding authorities. On the other hand, the tents and tarpaulins make-shift arrangements were inadequate to the vulnerable people to protect them from harsh cold. Furthermore, another challenge faced was the establishment of make-shift shelters in geologically unsafe areas with large cracks.



1.1.5 Temporary Shelter

The Federal government made an instant policy decision to support construction of temporary shelters. It aimed to shift the affected people under temporary shelter by mid-December 2023 (end of Mangsir as per Nepali calendar). The policy was to provide NPR 50,000 per household in 2 installments to construct the temporary shelter. The first installment was allowed to be distributed in cash but requiring a bank account to receive the second installment. The National Disaster Risk Reduction and Management Executive Committee brought a procedural guideline for constructing temporary shelters. The



federal Ministry of Urban Development deployed engineers to support the construction of temporary shelters. The engineers were tasked to train the local personnel and local level engineers.

The volunteers were mobilized by the political parties and a few personalities to construct the temporary shelters. The federal cabinet of 29 November 2023 made a decision to mobilize security forces to expedite the temporary shelter construction. The mobilization of security force was on the recommendation of a committee led by the Chief District Officer. Below table presents the status of temporary shelter construction and fund flow as of Jan 30th, 2024. The progress is far behind the government's initial plan. Both Rukum West and Jajarkot are making good progress but not up to the mark. The data shows that fund flow (70%) and construction progress (38%) of Jajarkot are going together, whereas Rukum West has been slightly behind in comparison to fund flow (68%)

while it has a remarkable progress in terms of shelter construction (64%). It shows that apart from fund flow other constraints are equally important to making good progress.

Slowing shelter construction factors

Delays in shelter construction are attributed to issues such as challenges with fund flow from banks to beneficiaries, administrative problems within LGs, absentee beneficiaries, finalization delays in compiling the beneficiaries' list, labor shortages, and fluctuations in the availability and prices of construction materials.

Delay associated with Banks for fund flow to the beneficiaries: Withdrawing amount by the beneficiaries from the banks contributed to delay. These are because of the discrepancies in account numbers entered into while concluding the agreement with LGs. Except Nepal Bank Limited, other banks have not been entertaining the bank account number assigned for social security fund. Nepal Bank Limited cleared it after receiving the authority from the head office. Agriculture Development Bank Limited, Khalanga Branch said that they are not accepting social security account numbers based on the discussion with NDRRMA officials in Jajarkot. To make the uniformity, other private banks are expecting government circulars on this issue. Limited capacity of banks in the affected areas is another problem. The beneficiaries have to travel long distances, but the banks cannot provide service. It has caused increased expenses of the beneficiaries on travel, accommodation, and food. The grant distribution policy had the provision of distributing in cash for the first installment, the Deputy PM and Home Minister informed this to the parliamentary committee as well, but the long queue at the banks are for the first installment. It refers to the fact that the policies declared at the federal level are not practiced at the operational level.



Delay associated with LGs for fund flow to the beneficiaries: There have been administrative issues in some LGs associated with differences among the officials and transfer of Chief Administrative Officer (CAO). Banfikot RM, Rukum West having 1,699 identified beneficiaries has not been able to disburse the grant because of the transfer of CAO. It is yet to conclude the agreements between the RM and the beneficiaries. Internal disputes within LG are another factor in the delay. Junichande RM, Jajarkot faced internal disagreements leading to account staff refusal to work. Even after signing the grant contracts for more than 2 weeks, Nalagad Municipality has encountered fund transfer problems due to the absence of signatories at the crucial time.

Delays are also caused by the absentee beneficiaries: The family members of those beneficiaries who are away from home have been facing problems in receiving the grant amount.

Delay in finalization of beneficiaries' list: The LGs and DDMCs have been struggling to finalize the beneficiaries list as the damage assessment and claim from the affected households is ongoing. Damage data is continuously pouring through the verification from police. Claims of separated families even

separation of husband and wife, which in some cases the elected leaders find as crafted to receive the government grant has further complicated the situation. MoUD was involved and prepared damage data, DDMC urged the LGs to conduct final assessment for finalizing the beneficiaries list, but all these efforts couldn't solve the problem timely. Had the learning from 2015 Gorkha Earthquake utilized and policies and procedures enacted to address such delay the situation could have been different.

Delay due to shortage of human resources: Labor shortage has also been noticed in some areas to construct the temporary shelters. It is most prominent to those households where only the female members are at home and the male members are abroad for earning. This will also be a serious problem while the reconstruction process proceeds ahead. The labor rate for skilled and unskilled human resources has increased approximately by 20%.

Delay due to shortage and / or increased price of construction materials: Market has remained relatively stable. A quick market survey was carried out to assess the availability and prices of key construction materials. The demand of bamboo surged to supply, and the price also increased almost double. However, very interestingly, the price of CGI sheets has decreased from NPR 11,000 to 10,000 per bundle. The decrease was mainly due to oversupply contributed by the supply from different supporting organizations bringing in CGI sheets purchased outside of the affected district. Besides the slow progress there is another issue related to providing the government fund to those beneficiaries who constructed temporary shelter by managing the required fund on their own. In Nalagad Municipality over 4,000 temporary shelters were



constructed through loans or credits by the beneficiaries. Those families are also facing the legal documentation of their shelters. The families residing in Kalpat village of Nalagad have constructed temporary shelters on rented land, as their original area was unsafe to reside in. They may face the problem of possible eviction, as the rental arrangements are very informally made with the landowners. The less-affected districts, namely Dailekh, Rukum East, Rolpa and

Jumla have the issue of being left out. These districts also have damaged houses, but very limited progress in shelter construction as insufficient fund is allocated for construction.

Protection, Gender, and Social Consideration

Delay in temporary shelter construction and inadequate support to the vulnerable groups requiring special needs has resulted losses of lives, physical assault, and psychological harms. Over 32 people mainly the post-natal women, children, people with chronic diseases have died due to cold triggered complications and timely treatment. One girl was raped while returning from the toilet nearby her makeshift tents in Nalagad. Residing in the makeshift tents/tarpaulins without doors and locking system, the women and girls remained always in fear and their male members are not able to go outside for family earning.

There are some families and people with different capacities and problems who need special support. An example is a family of 65-year-old mother and her 35-year-old son from Bheri Municipality ward number



4 Mulpani. Both have mental issues and cannot communicate easily with strangers. They cannot construct shelter on their own. There are several children who lost their parents making their living challenging. CDO of Jajarkot District Mr. Suresh Sunar estimates around 200 orphan children requiring special support. As an example, thirteen years old Dandaraj and his 8 years old sister Nisha are left with their elder brother Gagan Rana, who unfortunately is mentally challenged. They lost their mother and thus Dandaraj disrupted his school going and

Nisha is not able to concentrate in study due to emotional stress. Similar story goes with 8 years old Prem Kali BK of Nalagad Municipality ward 1 who lost her parents. Such children need comprehensive support in all areas such as constructing temporary shelter and later on their houses, providing some level of guardianships, psychological supports, food and nutrition, education, etc.



UNICEF has established child-friendly spaces in some areas. CMC Npeal has supported for psychosocial support. Several organizations have distribute dignity kits and Kishori kits. However, the situation of poverty, lost parents, living with psychological stress and disrupted education makes the adolsent girls exposed risk of trafficking.

Restoration of Lifeline Infrastructures

Electricity was restored within 10 hours post-disaster, but intentionally cut to collapsed buildings and nearby areas for safety. By day 2, power was reinstated in those zones. On November 10, 2023, the Nepal Electricity Authority provided free connections in tents and camps (Day 7). However, disruptions occurred on the night of November 10 due to rainfall. Despite power cuts and heavy traffic affecting telephone and internet services, roads, though minorly damaged, were quickly restored for operation.



In a Karnali Provincial WASH cluster meeting, it was reported that over 100 drinking water supply structures need repairs. The damage, including toilets, poses a secondary threat of waterborne diseases. The lack of safe water and sanitation has led to an increase in diarrhea, fever, and cough cases, according to local health institutions. On day 1, the market was closed, but hotel and restaurant businesses continued. The market resumed on Day 3 (November 6) with stable prices, indicating most enterprises operated from relatively safer buildings.

Early Recovery

1.1.6 Education

Education facilities were heavily damaged, affecting the education. Children are traumatized. Schools struggled to run the classes in the earlier stage and schools were closed. As the Grade 8 and 10 exams are approaching for their BLE and SEE thresholds, it is urgent to work on creating a schooling environment. UNICEF has already started its child-friendly space in a few areas and is planning to extend in each affected municipality across Jajarkot and Rukum West districts. At present the situation has become better. Construction of Temporary Learning Centers (TLCs) is undergoing with the support from various organizations and schools have resumed education. Still there are the gaps between TLCs need and construction progress.



1.1.7 Livelihood

Livelihood means particularly the agriculture and livestock witnessed heavy damage and losses. In response to the earthquake's widespread impact on infrastructure, agriculture, and livestock in Karnali Province, the government is actively focusing on rebuilding livelihood opportunities. The recently unveiled post-disaster



green restoration program of Karnali Province aims to address the looming food crisis in districts such as Jajarkot, Rukum West, and Salyan. With substantial losses in livestock, beekeeping, and agriculture, the government's strategy involves comprehensive support programs. Livestock rehabilitation, buffalo and goat promotion initiatives, and agricultural infrastructure development are key components. Also, targeted programs for fruit cultivation, vegetable production,

and beekeeping support aim to revitalize specific areas affected by the earthquakes. Collaborative efforts with governmental and non-governmental organizations underscore the importance of strategic initiatives for enhancing food security in the affected regions. The comprehensive approach seeks not only to provide immediate relief but also to foster resilience and economic stability in the earthquake-affected areas, especially considering the significant reliance on agriculture and wage labor abroad for livelihoods in the region.

Data and Information Management

Although various initiatives have been taken from different supporting organizations immediately after the earthquake event, data collection had been a bottleneck in providing relief and shelter support. The authorities have been struggling in finding out the verified data to estimate the actual needs at one side. On the other side, the support extended by different organizations is also not available at one place making duplication and overlapping in some areas and no support in some other areas. One of the major reasons for this situation was because of the use of different forms and templates by different organizations. The organizations such as District administration offices, Karnali provincial government, Association of international non-government organization, Social welfare council, Health emergency operation center, etc. have been using their own forms to collect the data. Similarly, the political parties and their sister organizations have been involved in supporting temporary shelter construction. However, there are no established mechanisms to report progress.

Several initiatives have been ongoing to address the comprehensive information management system. DDMC Jajarkot has established a dedicated information management team to receive and enter data, compile in usable form, and disseminate the information. The team comprises NDRRMA, UNDP, DPNet, Caritas, and other organizations. LGs are required to submit the data on a weekly basis.

Another initiative has been ongoing at the federal level to integrate all these forms and templates and make a comprehensive data collection template. The interaction program organized on January 2, 2024, was attended by different stakeholders, and discussed the issue. DPNet has been assigned to integrate the existing forms/templates and circulate among the stakeholders for feedback. Finally, NDRRMA will integrate the template into web-based Monitor for Disaster Strategic Action Plans (MDSA) system.



Coordination and Communication

Several efforts have been made to make coordination and communication with the stakeholders effective. The federal level interaction program attended by the Prime Minister discussed the issues related to reconstruction. At the district level, DDMC Jajarkot organized a shelter cluster meeting on 24 December 2023. The meeting was to discuss various issues related to temporary shelter construction. The main issues discussed were differences in grant amount provided by different organizations for temporary shelter

construction and gap in information sharing. The government has made a policy decision to provide NPR 50,000 per household to construct temporary shelters. But the support provided by various organizations varies between NPR 50,000 to 150,000 whereas some other organizations have been providing multi-purpose grant support and others providing only material support such as CGI sheets or toilets/WASH facilities to the beneficiaries. Such disparities and lack of information sharing has caused confusion among the beneficiaries. At the end, the meeting decided to share the shelter construction report by the supporting organization every week on Friday.



The District Administration Office, Jajarkot has made a communication campaign to reach out to the affected population on how to access assistance for constructing temporary shelters. Information boards have been installed at 77 strategic locations covering all 77 wards from 7 LGs. Similarly, 4 local FM radio stations and 2 online newspapers have been making public service announcements.

Support and Cooperation

As in the aftereffects of past disaster events, Nepalese society once again stood up for their generous support for relief and early recovery. Both individual and institutional-level offers were announced immediately after the earthquake. The list of relief support providers has been prepared based on the different media



reporting. The contributors list only covers the offers announced at the federal level and reported by the media, but there have been offers and collections at the province, district, and local levels. At the same time the Prime Minister Calamity Hazard Relief Fund has received NPR 281.96 million as of January 8, 2024. the Several UN Agencies, INGOs and NGOs were involved in supporting various response activities. The long list is presented in **Error! Reference source not found.**

Neighboring countries China delivered relief materials assistance worth NPR 280 million to Pokhara International Airport and India provided relief materials worth NPR 160 million and delivered to Nepalgunj Airport. Later on, India has made a commitment of NPR 10 billion grant for the reconstruction of the earthquake affected areas.

The relief contributes comprises of support from every corner of society. The offers are as per their capacity. For example, the garment owner announced providing jackets and shoes company with shoes and sandals. The business establishments announced support in cash, whereas the friendly countries announced and provided relief materials in kind.

Besides the external assistance, the federal and provincial governments have provided relief assistance to the affected areas and have been making several decisions for reconstruction support. Below is the key assistance provided by the federal and Karnali Provincial government.

In response to the devastating earthquake impact in Jajarkot, Rukum West, and Salyan districts, a meeting



led by the Deputy Prime Minister and Home Minister took significant steps to provide immediate relief. The decision to release NPR 100 million to these affected districts was endorsed by the federal cabinet meeting. The Federal Government also announced financial support, providing NPR 200,000 to the family of each deceased individual, with an additional NPR 100,000 top-up for families facing multiple losses. Further, free treatment for the injured in government hospitals was declared as part of the relief efforts. The Karnali Provincial Government contributed by releasing NPR 24.5

million to 16 affected LGs in the three districts to manage search and relief expenses. The federal government established a reconstruction fund of NPR 10 billion, allocating NPR 50,000 per household for the construction of temporary shelters. Additionally, the Karnali Provincial Government committed to the reconstruction of all public buildings damaged by the earthquake. In a comprehensive approach, the provincial government also unveiled a green-restoration program to address agriculture and livestock damage, emphasizing the holistic recovery of the affected areas.

Long-Term Reconstruction and Recovery Planning

An interaction program was organized in Kathmandu with the participation of Karnali and Sudur Paschim Provincial and LGs officials for the reconstruction planning, but no concrete shape has been resulted. The interaction program was attended by the Rt. Hon' Prime Minister and other high-ranking officials. One of the major points of discussion was enhancing NDRRMA's capacity through amendment of legal provision to make the reconstruction faster. The PM emphasized tailored reconstruction models aligned with cultural and social aspects, which was one of the shortcomings and lessons learned from 2015 Gorkha Earthquake reconstruction.



In another meeting organized at the Ministry of Finance and attended by the Development Partners (DPs), NDRRMA Chief presented an initial estimate of NPR 69 billion to reconstruct the private houses, public buildings, and damaged infrastructures. The finance minister urged the DPs to support, and the DPs expressed their readiness to assist in the reconstruction efforts. In a recent official visit of the Indian Foreign Minister, the Government of India has promised to support NPR 10 billion for the reconstruction process.

In terms of field execution discussing the reconstruction aspect becomes too early, as the temporary shelter construction is yet to be completed. However, in terms of planning it should be started right now. The interaction programs outlined above are a good start. The policy of reconstruction support, the modality, the funding arrangement, the human resources, and construction materials arrangements, etc. needs thorough planning by utilizing the lessons from the 2015 Gorkha Earthquake. The key issues from the 2015 Gorkha earthquake such as non-protecting the vernacular structures, inadequate living space in the reconstructed houses, missing the opportunity to bring the scattered houses in a cluster, making the planned settlements, reconstruction hassles and delays faced by the affected households, etc. should be duly considered and not repeated in this reconstruction.

Field observations showed that some people have already started reconstruction of their houses. It needs to be well communicated from the authority to ensure that the reconstruction should not only be replacement of damaged houses but built safer following the **Build Back Better** (BBB) concept. Similar learnings were also from 2015 Gorkha Earthquake reconstruction, as the capable households do not wait for the government call and later on becomes an issue during the government's grant distribution.



Initial assessment figures show that over 62,000 houses need reconstruction, although the number may be different after a detailed damage assessment. Learning from the 2015 Gorkha Earthquake says that the exaggeration of damaged houses from the affected people and local leaders took several surveys and grievance handling mechanisms delaying further the reconstruction. As most of the damaged (either fully collapsed or partially damaged) are not safe for a similar magnitude earthquake, all those need to be strengthened either through retrofitting or reconstruction. The reconstruction planning may consider this fact to provide differential grant support to the fully collapsed houses and a mix of small grant amounts and soft loans to other partially damaged houses to make the houses safer rather than going for an iterative administrative process of damage assessments and grievance handling.

As reported by onlinekhabar.com (November 5, 2023), the cabinet meeting of November 5 has decided to reconstruct earthquake-resistant infrastructures within one year, which sounds like an ambitious decision. Rather, supporting the construction of good temporary shelters sufficient to protect from this winter and next year monsoon and winter seasons and taking sufficient time for reconstruction following a true spirit of BBB would be a wise and pragmatic decision. Otherwise, the reconstruction may turn out to be only **Build Back Safer** by constructing very small houses inadequate to the families instead of BBB as in the case of the 2015 Gorkha Earthquake reconstruction.

Risk Sharing

One of the insightful initiatives taken by the Karnali Provincial Government was to bring all the people of Karnali Province under insurance for natural disaster. The program which was initiated 2 years ago was covering an amount of NPR 200,000 per person for the death from any natural disaster. The far-sighted program came into realization after the Jajarkot Earthquake 2023. Now, the national insurance company has been paying the insured amount of NPR 200,000 per deceased. As of the reporting period, families have already received 142 and 12 are in the process. This is a huge financial support to the families of those deceased.



Issues and Challenges

Preparedness for Response: Good preparedness makes the response effective. Policy provisions and guidelines expect preparation of Disaster Preparedness and Response Plans (DPRPs) through federal to LG level. Both the Jajarkot and Rukum West districts had DPRPs for 2023. DPRPs have done stock-taking of relief materials and have outlined very little quantity of NFI relief materials. However, the DRPPs have no plan to link with the designated warehouses or any organizational assurance for a defined quantity of relief materials in case of a disaster event. Hence, in spite of having the DPRPs, the relief support was solely dependent on the offers from different agencies and organizations after the disaster event.

Shelter Management to Reconstruction of Damaged Houses: In spite of timely policy decision and proactive involvement especially of political parties to support temporary shelter construction, the progress is far behind the originally targeted date. A similar or even worse situation is ahead for the reconstruction of over 70,000 houses if some drastic changes in policies, mechanism and process had not been defined and followed. The reasons behind the delays in temporary shelter construction are not new, but already realized one during the 2015 Gorkha Earthquake reconstruction. But those learning were not found applied rather repeated the same mistakes or weaknesses.

Foreseeable Vicious Cycle of Poverty: The areas affected by the earthquake are the homes of many poor families. Most of their agricultural production can serve for a maximum of 6 months. They go abroad or India for earning and managing their household expenses. But, due to the earthquake and still struggling in the makeshift shelters, those bread-earners are not able to go for earning. They lost whatever grain they had due to the damage to their house. They further need to be involved in house reconstruction. In this way, there is danger of bringing further down to their poverty level if some alternative income generating measures are not built in and implemented while recovering from the earthquake.

Coordination and Communication: Coordination and communication within the government at all levels had been in the form of correspondence and meetings. The damage and loss of data communication has been in the vertical layer of LEOC, DEOC, PEOC and NEOC. The LEOC submits the data to DEOC and DEOC forwards the consolidated data to PEOC and NEOC. There were concerns about not submission of required data in time.

Although the federal governance system has provided defined roles and responsibilities to the 3 levels of government. But, in reality, centralized decision-making and the local and provincial governments relying

on the federal government have made the response operation very lengthy and less efficient. Karnali Province Minister for Internal Affairs and Law, Mr. Krishna Bahadur G.C. mentioned that there is a stock of relief materials in the provincial government's warehouses. However, due to coordination issues with the federal Ministry of Home Affairs, the province government is facing challenges in effectively utilizing the necessary materials in a timely manner.

Communications and coordination between government authorities and I/NGOs has been mainly through organizing multi-stakeholders and cluster meetings at the district and local levels. The Social Welfare Council, the nodal agency of government to the I/NGOs issued a press release on November 4, 2023, urging them to assist in search, rescue, and relief in the working areas.

Damage and Loss Assessments: Damage and loss assessment is one of the vital components in the after-effect of a disaster to plan relief, early recovery and reconstruction and demonstrate transparency and accountability for relief and reconstruction assistance. As per the policy provision a team comprising representatives from LG, police and NRCS prepares Initial Rapid Assessments (IRAs) to provide the initial scenario. LG-wise IRAs were completed within 5 days. The IRA reports provided the number of casualties, houses damaged, people displaced, schools damaged, other facilities damaged and immediate needs including the disaggregated data and special needs of most vulnerable people.

It is a very challenging task to be completed quickly in a difficult situation. The issues of exaggerated reporting or left outs were the concerns. It may not necessarily be on the IRA's data, but there are concerns regarding the timeliness of data submission and the reliability of submitted data.

The Bheri Municipality published a notice on November 13, 2023, informing suspension of the distribution of the first-level relief materials until further notice. The suspension was because data on the damaged households have not been finalized yet and may take some time to compile. The Aathbiskot Municipality has also published a notice requesting people to submit information and details about the status of the houses. Similarly, District Administrative Office of Rukum West published a notice on November 15, 2023, requesting all the local level government to provide the details of the damage caused by the earthquake in a specified format.

The grant mobilization working procedure for temporary shelter construction has outlined a detailed procedure for damage assessment with the involvement of a municipal engineer and local disaster management committee. The data collection process, templates used by different agencies, and unjustified claims from the affected households made the data finalization process cumbersome, which further delayed in relief distribution and grant distribution for temporary shelter construction.

Consideration for Gender, Disability and Social Inclusion and Protection: Disaster is equal to all people in the affected areas, but effects vary according to the vulnerable groups asymmetrically. The death figures count more than half of the number of children and more women in comparison to men. Women and children including the elderly, and people with disability and chronic diseases are much more vulnerable to men. As the earthquake occurred at midnight all the children were in deep sleep and their escape without other's assistance became almost none thus increasing the number of children casualties. The heightened mortality among women is associated with the migration of male family members for work, resulting in fewer men present during the earthquake. Moreover, the elevated casualty rate for women can be attributed to their roles in actively safeguarding lives and property, risking their lives even in earthquake tremor as they take on responsibilities for caregiving and property protection in the absence of male family members.

Gender disparity was noticed in the affected areas. Women and adolescent girls were facing challenges in accessing facilities and personal hygiene. LGs have been putting their efforts into providing high-energy biscuits and Horlicks, but pregnant women and lactating women have been saying their need for a more diverse and nutritious diet including cereals, rice, lentils, wheat flour, ghee, mustard oil to support their health and that of their unborn babies. Non-availability of women and children-friendly shelter space is another challenge faced by the women. Psychological counseling, arrangement of appropriate shelter, warm clothing, and hygiene kits are urgent needs for women and adolescent girls. One girl was found raped while using the makeshift shelter and unsafe toilets. Long staying in the makeshift shelters has made the women and adolescent girls always living with fear of assaults.

Protection of Forest Area: Community forests have witnessed pressure under the name of temporary shelter construction. The Nalagad and Kushe area in Jajarkot reported an indiscriminate tree cutting in certain community forests despite the distribution of free timber and firewood as per the approved action plan.

Long-Term DRR Measures: Ideally, disaster risk reduction measures followed by preparedness before any disaster event, and response and recovery after the disaster are the actions in priority order in terms of importance. But, after the event of disaster response and recovery become urgent actions as well as priorities in order. Adequate preparedness is the prerequisite for an effective and efficient response followed by recovery. This section tries to put observations from the Jajarkot Earthquake on these issues to strengthen DRRM initiatives in the days ahead based on the learning from real disaster event.

From the policy provision and appropriateness, planning and implementation of long-term mitigation and disaster risk reduction measures lie with the LGs. Its approach includes mainly preparing and implementing LDCRP, multi-hazard risk assessments, risk-sensitive land use plans, NBC enforcement plans, etc.

Aathbishkot Municipality, and Chaurjahari Municipality have prepared building construction working procedures. Musikot Municipality has prepared a land use working procedure, 2079 B.S. After the Jajarkot Earthquake 2023, the National Earthquake Monitoring and Research Center has upgraded its earthquake monitoring system by placing a seismometer near the recent epicenter in Ramidanda, Jajarkot. The federal cabinet had decided to conduct a feasibility study to make all the houses insured for disaster risks. These all are appreciable initiatives.

As usually said, “*We forget the disaster as time elapses and disaster hits us when we had forgotten*”. This saying should be proven wrong after a series of earthquake disasters witnessed by this generation in recent years. Some of the recent earthquake disasters are – the Eastern Nepal-Sikkim Earthquake in 2011, The Gorkha Earthquake in 2015, the Lamjung Earthquake in 2021, the Khotang Earthquake in 2022, the Doti Earthquake in 2022, the Bajura Earthquake in n 2023, the Bajhang Earthquake in 2023, the Dhading Earthquake in 2023, Jajarkot Earthquake in 2023.

All except the 2015 Gorkha Earthquake should be taken as an awakening call to be prepared for the bigger and worst.

Conclusion and Recommendations

Search and Rescue

In the pretext of geographical constraints, an inadequate number of human resources, inadequate opportunities to receive training, and low level of logistics at the security forces and health institutions the search and rescue operation carried out has been found highly appreciable. Duly utilization of the DPRP prepared and its improvement makes the efforts much more efficient and effective. The human resources and logistical gaps need to be addressed especially with the support from provincial and federal governments. Self-mobilized participation of the LG leaders and community people was also found highly appreciable. However, community engagement through dedicated and trained volunteers and more institutionalized engagement from LG is required to make it much more effective. The makeshift shelter arrangements were far below the actual needs. Clearly defined prioritization criteria based on the vulnerability of the affected people scale of damage can address the demand-supply gap to some extent. In addition, promotion of the use of local materials needs to be promoted rather than creating dependency on tarpaulins and tents. For example, we have the good practice of making warm huts in no time by using maize, millet, wheat, and paddy straw.

Data Collection, Sharing and Dissemination

Although there exists a defined protocol for data generation and dissemination, comprehensive data were not available in one place, for example, the DRR Portal hosted by the Ministry of Home Affairs was publishing the updated data, but the data available with the Police authority, and district authorities were differing from the Portal data. NDRRMA has a Bipad portal to dynamically capture the incidents and damage data, but these were found not easily accessible or updated. Damage assessment needs further improvement to make it trustworthy by mobilizing a locally led accountable team. The data needs to be disaggregated so that the most vulnerable people can be prioritized and targeted in response actions.

Similarly, the use of different templates by different agencies was found making the comprehensive data collection, consolidation, and sharing. It delayed the relief distribution and grant distribution for temporary shelter construction. Furthermore, the relief distributed, and support provided for temporary shelter construction were not uniform, data sharing thus making the tracking of progress difficult, duplication in some areas and missing out in the remote areas. A good initiative has already been ongoing to consolidate the data collection and sharing template, which needs to be logically concluded.

Relief Operation

Although the LGs were heavily involved in distributing the relief materials it was found to be much more a centralized governed process. Too many layers of decision-making and resource control made the relief operation unnecessarily lengthy and cumbersome. The one-door policy has certain merits in terms of coordination and matching the supply and demand. However, its operationalization was found much more from the mistrust and controlling perspective.

It needs greater clarity in understanding and practice with the maximum utilization of information technology for demand and supply management. Other than the timeliness, some concerns regarding the appropriateness of relief items, the quality of some food items, and package vs individual items surfaced. It needs to be addressed by defining the nominal minimum package for different disasters and additionally augmented through individual relief items. The option of cash-based relief needs to be kept open depending

on the severity of the disaster and market functioning to address the issues of timeliness, appropriateness, and quality.

Keeping the minimum level of relief stock and or clearly defining the pathway of receiving the minimum relief materials should be defined in the DPRPs rather than looking outside and starting discussion after the disaster happens.

DPRP Preparation and Utilization

Both Jajarkot and Rukum West DDMCs have prepared DPRPs covering various aspects. Review and reflection on the application of DPRPs immediately after the completion of the emergency response phase could address the gap, such as scenario planning for earthquake hazards, working on the defined standards, implementation of temporary learning centers and psychological counseling, the effectiveness of relief distribution following the one-door policy, stocking of relief materials, etc. Similarly, the LGs are required to practice preparation of DPRPs and use. I/NGOs could be good organizations to facilitate the formulation and practice of a simple but functional DPRP.

Early Recovery

The federal government has brought policies and procedures for the construction of temporary shelters very timely. Voluntarism was also found good to construct temporary shelters. But the progress of temporary shelter construction remained far behind the original plan of the federal government. Several reasons for the delay have been discussed and most importantly the gap was not utilizing the learning from 2015 Gorkha Earthquake reconstruction. For example, the delay on the side of banks due to accounts, signature, banks capacity, not entertaining the already existing bank accounts were the lessons and could have been amicably fixed. The delay in shifting the affected families from make-shift shelter to temporary shelter has caused several problems. The major problem is the deaths of vulnerable people from the harsh cold, while staying in the make-shift shelters.

Schools have resumed education through temporary learning centers, but still the demand is behind the supply. The WASH sector also needs proper attention, as it becomes the main cause of secondary disasters if not managed timely.

Reconstruction and Recovery

The federal government has already started the planning. Initial estimated financial needs have been floated, interactions have been conducted with the stakeholders and development partners. It needs concerted efforts in detailed planning, financial and institutional arrangements for effective reconstruction. Learning from the 2015 Gorkha Earthquake reconstruction process as well as from the temporary shelter construction after Jajarkot Earthquake should be thoroughly reviewed and utilized during the reconstruction process. Similarly, the Karnali Provincial Government has unveiled an agriculture and livestock based comprehensive livelihood restoration program, which needs to be translated in the field by ensuring financial and institutional arrangements.

Long term disaster mitigation and risk reduction measures

We cannot avoid natural hazards like earthquakes but can reduce disaster risks through structural and non-structural measures. The key risk reduction measure for earthquake disasters is the construction of earthquake-resistant buildings and other physical infrastructures. In the last decade, we experienced the

Eastern Nepal-Sikkim border earthquake of 2011 damaging several school buildings. The learning from that has contributed strengthening of school buildings, although not on a massive scale, those strengthened school buildings well resisted the 2015 Gorkha Earthquake.

After the 2015 Earthquake, the people as well as the government authorities were highly sensitized and also acted to some extent to initiate DRR measures. For example, the government issued notice to dismantle the building code non-compliant private houses and a few households were dismantled as well. Interestingly, with an engineering background, some households approached the lead author of this report seeking advice on whether they should dismantle their houses, considering they were built beyond the permitted stories in the building code. Naturally, the answer was ‘yes’ remove the extra floor and be safe. But, later on, the government authorities forgot their directives and those households consulted didn’t go for dismantling rather they preferred to go for plastering and painting of their houses.

The private house reconstruction after the 2015 Gorkha Earthquake was successful keeping aside some issues such as - lack of vernacular designs adopted, inadequate living space, lack of clustered construction, etc. However, a lot of technical and procedural guidelines were prepared and tested, and engineering technicians and masons were massively trained and mobilized during the reconstruction process. There are several other home-grown learnings and lessons. Furthermore, the federal governance structure adopted immediately after the earthquake has made resourceful LGs with authorities to regulate safer building construction. However, the initiatives taken to apply those learning are not encouraging. Media reporting says the reconstruction after the Doti and the Bajhang Earthquake has not taken pace as required.

In the pretext of those learnings, the earthquake hazard-prone situation of the country and the occurrence of damaging scale earthquakes regularly, including the Jajarkot Earthquake require the attention of the government authorities to start immediately a long-term initiative for disaster risk reduction.

Based on the series of DPNet situation analysis reports, observations, interactions with different stakeholders, following the media reporting and recalling lessons learned from previous disasters, following **recommendations** have been made. These recommendations not only cover the remaining tasks of recovery from the Jajarkot Earthquake but to learn and improve the overall DRRM of the country especially focusing on earthquake disaster.

- There's a need for a unified, legally binding form to track disaster relief activities. This form should comprehensively capture who is involved in the relief efforts, what actions they are taking, and where, when, and why these actions are happening. Such a form would greatly improve coordination, transparency, and accountability in disaster response.
- The government's one door policy, especially concerning cash distribution, requires more clarity. Detailed guidelines and a clear framework should be provided to minimize confusion and ensure that the policy is implemented effectively and efficiently.
- In instances where a disaster affects multiple districts, the one door policy's coordination should be escalated. When it crosses district borders, it should move to the provincial level, and if it spans across provinces, it should go to the federal level. This hierarchical approach to disaster management, as evidenced by the Jajarkot earthquake's response, would ensure a more equitable distribution of assistance, and prevent the neglect of less focused areas.
- Humanitarian partners often focus on their designated operational areas, which can lead to unequal distribution of relief. An efficient one door system should address this problem by encouraging these

partners to expand their relief efforts to areas beyond their usual scope, ensuring a more balanced distribution of assistance.

- Many banks are currently not accepting social security allowance accounts for disaster relief purposes, forcing beneficiaries to open new accounts. This practice needs to be addressed by government directives, allowing the use of SSA accounts for receiving grants, thereby simplifying the process for beneficiaries.
- Delays in assistance distribution are often caused by administrative changes, such as when a new Chief Administrative Officer (CAO) is appointed. People end up waiting several weeks to receive grants. This issue needs to be resolved by implementing measures that ensure continuity in assistance distribution, regardless of administrative changes.
- Conflicts between District Disaster Management Committees and LGs have been observed, often arising from hierarchical disputes. This can impede the calling of essential meetings. To address this, the Ministry of Home Affairs or the National Disaster Risk Reduction and Management Authority, Ministry of Federal Affairs and General Administration should facilitate to create a more conducive environment for collaboration.
- Humanitarian agencies, while accountable to their donors, often do not coordinate with other agencies, leading to duplicated efforts. There should be a concerted effort to foster coordination and discussion among these agencies, ensuring more efficient use of resources and avoiding overlap in assistance distribution.
- Many humanitarian partners do not consider government-provided data on poor households and adopt a blanket approach to distributing materials. This practice often overlooks the varying levels of vulnerability, such as poverty levels, among affected populations. A more nuanced approach that considers these factors is needed to ensure that the most vulnerable are adequately supported.
- There's a tendency for humanitarian partners to focus on easily accessible areas, leaving remote areas underserved. This uneven distribution of assistance needs to be addressed, ensuring that relief materials reach all affected areas, regardless of their accessibility.
- The lack of warehouses at the district level, especially in mountainous and hilly areas, hinders efficient disaster response. Establishing at least one warehouse in each district, considering the potential for future extreme disasters, would greatly enhance response capabilities in these regions.
- The Disaster Assessment Guideline (DAG) from 2014 requires immediate amendment to incorporate a Multi-Sectoral Initial Rapid Assessment (MIRA) and Cluster-Specific Detailed Assessments. This update would enable a more comprehensive and effective evaluation of disaster impacts, assisting in tailored response strategies.
- The reliability of local-level data is often questionable due to political influence, which can lead to exaggerated figures of beneficiaries. There should be a mechanism to hold elected representatives accountable for presenting inflated data, ensuring more accurate and honest reporting.
- The problem of accurately screening beneficiaries poses a significant challenge, often preventing municipalities from determining the exact number of affected people. The NDRRMA should facilitate and expedite this process, ensuring that relief reaches all those who need it.
- Stakeholders often overlook geological aspects when rebuilding in disaster-prone areas, leading to structures being reconstructed in locations that have already suffered damage. This oversight needs to be addressed, with emphasis on building in safer areas and considering geological risks.

- Issues like land fissures caused by earthquakes are often ignored. If not properly addressed, these fissures can lead to major landslides, especially during the monsoon season. It is crucial to consider and mitigate such geological issues in post-disaster scenarios.
- The impact of disasters on livelihoods, such as the loss of livestock and crop damage, is not always adequately addressed. This neglect can severely affect the recovery of the poorest people affected by disasters. A more comprehensive approach to assessing and addressing these losses is essential.
- Injured individuals, especially those with dependent children, require special care, including medication and support. Government and humanitarian agencies should prioritize assistance for these vulnerable groups, ensuring they receive the necessary care and support.
- Monitoring the compliance of minimum humanitarian standards in relief support is essential. This would ensure that all relief efforts meet a basic level of quality and effectiveness, providing the best possible assistance to those in need.
- Parents who have lost their children, as well as children who have been orphaned, require psychosocial support and other necessary assistance. Special care programs should be established to cater to the needs of these vulnerable groups.
- The construction of mud and stone houses without technical guidance is prevalent in some areas, leading to structures that are not resilient to disasters. Advocacy and regulations are needed to ensure that new constructions are disaster-resilient and technologically sound.
- The inflation in the price of local materials and labor, particularly in disaster-affected areas, needs monitoring and intervention. This would help control costs and ensure that rebuilding efforts are not hindered by unaffordable prices.
- There is a shortage of technically skilled labor for constructing resilient houses. Providing technical training to local masons and builders would address this gap, ensuring that new constructions are better equipped to withstand future disasters.

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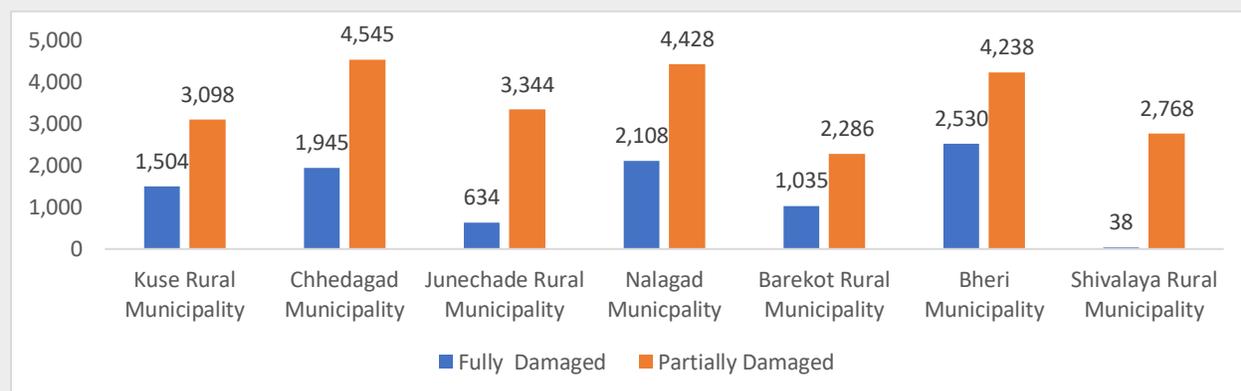
Annex

Annex 1 - District and LG wise Details of Damaged Buildings

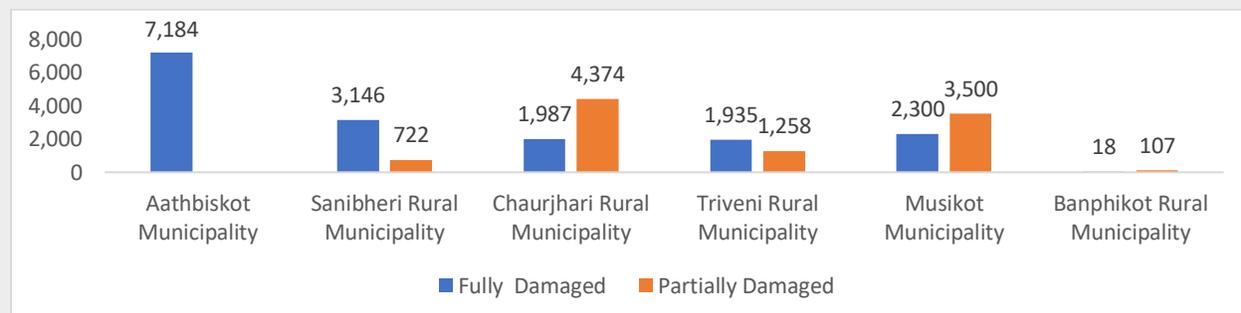
SN	District	Private Houses		Government Buildings / Public Buildings		School Buildings	
		Fully Damaged	Partially Damaged	Fully Damaged	Partially Damaged	Fully Damaged	Partially Damaged
1	Jajarkot	9,794	24,707				
2	Rukum West	16,570	9,961	16	21		
3	Rukum East	9	148		4		
4	Salyan	151	512				
5	Rolpa	25	87		1		
6	Nawalparasi East		1				
7	Dailekh	1	1				
8	Dang		7				
9	Baitadi	1					
10	Jumla	5			1		
11	Kalikot	1					
12	Pyuthan		31		1		
13	Achham				6		
Total (Fully and Partially Damaged)		26,557	35,455	16	34	208	418
Total Building Damaged			62,012		50		626

Data Source: Adapted from NEOC update as of November 16, 2023; School data from UNICEF Nepal

LG-wise distribution of private houses damaged: Jajarkot.



LG-wise distribution of private houses damaged: Rukum West



Annex 2 - Major Timeline of Response

Date	Time	Hour [Day]	Key Action	Remarks
3 Nov 2023	23:47	0 hr. [Day 0] ¹	Main Shock occurred	
4 Nov 2023		Day 1	Family members / neighbors / Security forces started search and rescue operation	Immediately after the disaster
4 Nov 2023		8 hr. [Day 1]	PM visited the affected area with medical personnel and medicines	Around 8 hours
4 Nov 2023		9 hr. [Day 1]	Minister for Home Affairs convened a meeting of key government officials and security forces. Press release	<ul style="list-style-type: none"> Decided to release NPR 100 million to Jajarkot and Rukum West districts. Decided to follow one-door policy at DDMC level. Mobilizing IRA team in coordination with NRCS Putting every effort for search and rescue; treatment to injured and relief distribution
			Trauma Center and Bir Hospital in stand by position for receiving victims	
			Nepal Airlines Corporation had 2 twin otters aircraft standby for victims' support (1 each in Kathmandu and Nepalgunj)	
4 Nov 2023	10:00	10 hr. [Day 1]	Nepal Electricity Authority	Restored electricity supply in the affected areas except to the collapsed building
4 Nov 2023		Day 1	Ministry of Federal Affairs and General Administration	Directed staff working at the LGs to cut down leave and return back to office
4 Nov 2023		Day 1	Social Welfare Council press release	Requesting I/NGOs to support for rescue, relief, and rehabilitation in the working areas in coordination with LGs and District Administration Offices
			4 Ministers and MPs visit to affected areas with blankets, sleeping bags and tents	
4 Nov 2023			Convened Karnali DRRM Council Meeting followed by Cabinet Meeting Chief Minister visited the affected areas	
4 Nov 2023		Day 1	NPC started losses assessment by mobilizing Action Team	
5 Nov 2023		Day 2	Press release from the PM Office	<ul style="list-style-type: none"> Providing bank details for relief fund collection

¹ As the earthquake occurred just at the midnight only 13 minutes before the next calendar day, for practical purpose next calendar day has been taken as Day 1.

5 Nov 2023		Day 2	District Administration Office, Jajarkot press release	<ul style="list-style-type: none"> Immediately after the earthquake DAO and security forces had a meeting and mobilized for search and rescue. Started receiving relief items and will be distributed following the one-door policy. Urged to provide relief materials.
5 Nov 2023		Day 2	Nepal Electricity Authority restored electricity in the building damaged areas as well	
5 Nov 2023		Day 2	Convened Federal Cabinet Meeting	<p>Decided to provide.</p> <ul style="list-style-type: none"> free treatment to the injured NPR 200,000 per deceased to the family Completing reconstruction within 1 year Accepting international assistance One-door system to be followed, designated Surkhet as primary and Nepalgunj the secondary points for relief operation.
5 Nov 2023		Day 2	Convened NDRRM Council Meeting after the cabinet meeting	
5 Nov 2023		Day 2	NRCS started publishing Initial Rapid Assessment Reports (Palika wise)	The reports include disaggregated data-based needs
8 Nov 2023		Day 5	Nepal Communist Party (UML) decided to mobilize 1,000 volunteers for temporary shelter construction starting November 18, 2023	
8 Nov 2023		Day 5	Security forces started recovering valuables, food grains, utensils from the damaged houses	
8 Nov 2023		Day 5	Farmers and Tailors started their activities. Market (restaurants/hotels/shops) have already started their business	
9 Nov 2023		Day 6	Federal Cabinet Meeting decided to amend the Disaster Rescue and Relief Standard	
??			Bheri Municipality Mayor mobilized youths for dismantling dangerous houses and distributing relief	
??			Armed Police Force had set up temporary shelter camps	

10 Nov 2023		Day 7	Nepali Congress leaders and volunteers constructed 2 temporary shelters as a demonstration and estimating the cost and human resources	
10 Nov 2023		Day 7		<ul style="list-style-type: none"> • The affected areas faced rainfall causing extreme cold and put challenge to protect the food grains. • 2 affected people with existing health problems died
10 Nov 2023		Day 7	Nepal Electricity Authority provided free connection and electricity in tents and temporary shelters	
12 Nov 2023		Day 9	IFRC Emergency Appeal	Appealing for Swiss Franc 5 (Approx. NPR 740 million) million assistance
12 Nov 2023		Day 9	Convened NDRRM Executive Council Meeting	Providing 50,000 per family for constructing temporary shelter
12 Nov 2023		Day 9	Nepal Communist Party (Biplav) has been constructing temporary shelters	
			Child Club expressing their emotions through drawing, painting, and engaging themselves in games	
			Armed Police Force providing counseling to the affected people	
13 Nov 2023		Day 10	Convened Cabinet Meeting	<ul style="list-style-type: none"> • To provide NPR 50,000 for temporary shelter construction • MoUD to provide technical support. • NDRRM EC to prepare working procedure. • Karnali Provincial Government to coordinate with LGs and MoUD for mobilizing human resources. • Provincial Government to monitor the shelter construction. • To establish NPR 10 billion fund for recovery and reconstruction • Appealed donor communities for assistance • Directed the Chief Secretary to prepare a report on insuring private and other buildings realizing the multiple disasters. • Forming all party mechanism under the convenorship of ward chairperson to coordinate temporary shelter construction

Organizations and Individuals Offering Relief Assistance

Please refer to the following link to see the list of agencies offering humanitarian support

<https://docs.google.com/spreadsheets/d/1AyCbU7uNtnotmKWQmQkQcWtr9ucRhAa3/edit#gid=20821429>

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