



# **Bajhang Earthquake 2023**

## **Situation and Needs Assessment Report**

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## Preface

DPNet, serving as an umbrella organization of various United Nations Agencies, International Non-Governmental Organizations (INGOs), and Non-Governmental Organizations (NGOs) working in the field of disaster management in Nepal, holds a pivotal role in coordinating efforts and information dissemination in times of crisis as well. Additionally, as the Secretariat of the National Platform for Disaster Risk Reduction (NPDRR), our commitment to closely monitoring significant disaster events and disseminating critical information to stakeholders is always our priority.

From the onset of the Bajhang earthquake, DPNet has been at the forefront, publishing daily situation analysis reports and deploying professionals to the field to gather essential information. This has ensured that all stakeholders, including response teams and aid agencies, have had access to timely and accurate data to guide their interventions.

I would like to extend my heartfelt gratitude to Harsha Man Maharjan, Dinesh Gurung, Kshitiz Paudel, Nishan Kumar Aryal and Shiva Raj Budha for their diligent efforts in compiling this report. Their dedication has been instrumental in shaping the document into a resource that will undoubtedly aid in the recovery and rebuilding efforts. Without the support of DCA, these initiatives and this report would not have been possible. DCA deserves heartfelt thanks for its support and contribution.

Special thanks are due to Dinanath Bhandari for his swift action in visiting the earthquake-affected areas immediately following the disaster. His contributions to the daily situation reports and his role in authoring this comprehensive report have been invaluable. Similarly, Dr. Raju Thapa deserves recognition for his tireless work, often extending through the night, to edit the daily situation analysis reports and this final document.

My appreciation also extends to all DPNet Executive Committee members, the DPNet family, and everyone who contributed directly or indirectly to this report. Your collective efforts have not only contributed the path to recovery but have also reinforced our commitment to disaster risk reduction and management.

Surya Bahadur Thapa  
Chairperson, DPNet

## Executive Summary

Far Western Nepal was hit by series of earthquakes on October 3, with at least 12 shocks of 5.0 to 6.3 magnitude in 15 hours. There were over 1000 aftershocks of less than 4.0 magnitude within a week, which are not listed in this report. Seven districts viz. Bajhang, Bajura, Baitadi, Dadeldhura, Achham, Darchula and Doti were affected of which Bajhang and Bajura were more affected. One person lost her life in an earthquake-induced landslide in Bajhang and 30 other were injured of which 21 from Bajhang, 5 from Achham, 2 from Baitadi and 2 from Doti district.

The earthquake mainly affected building, most of them private houses. As per initial reports prepared by the local governments, 3598 private houses are completely damaged (i.e. severely affected) and other 11,280 are damaged partially in 7 districts. Bajhang sustained most of the damages: 2906 houses completely and 6140 houses partially, followed by Bajura where 678 houses were completely damaged and other 5092 partially. These data have yet to be technically verified. 124 government buildings, mostly schools, were completely damaged of which 123 are in Bajhang and one in Achham. Other 205 government buildings are partially damaged of which 152 are in Bajhang, 28 in Bajura, 14 in Baitadi, 9 in Achham and 2 in Darchula districts.

While some sections of roads were blocked for few hours due to landslides, there was not significant disruption in lifelines such as electricity, water, telecommunication and other services. A few livestock were reported dead, and a few others were injured. Mostly people, including schools, managed rescue themselves and brought students to safety. Regarding human casualties, fortunately, the count is lower than could have been. This is possibly due to a foreshock of 5.2 magnitudes that struck 26 minutes before the second hit of 6.3, which caused the most physical damage. Urgent needs of temporary shelters for those whose houses were completely damaged. Humanitarian agencies have fulfilled needs with temporary shelter kits including some more essentials like food. However, food and utensils were not significantly damaged except of one school. No camps required to establish as the affected families have managed temporary shelters at their foregrounds. Similar situation in the case of water, food, fuel and other materials that would require if people were shifted to camps.

The initial assessment focused on listing households with physical damages. Impact on vulnerable groups and their needs are yet to be assessed. There are few more issues that the earthquake has exposed regarding our earthquake preparedness and response. The urgent need is to initiate the rebuilding of damaged buildings and complete it before the onset of the next monsoon. Recovery supports could be aligned with mason training to the existing building workers and affected families.

We recommend to technical verification of damages as soon as possible and initiating the rebuilding of damaged private houses and government buildings. Support to continue schools is crucial and most urgent. Recovery support should be aligned with reconstruction and training to safe house construction is a must because most of the houses and buildings were damaged due to significantly poor construction. From the management point of view, local governments should take leadership and the initial damage and needs assessment process and practice should be reviewed and revised based on the learning from this event. Humanitarian agencies could also consider rethinking of their engagement ensuring that the government does not get away from their primary responsibility.

# [1] INTRODUCTION



**Figure 1. Temporary shelter of a family with a two month old child in Sutiyan village.**

On the afternoon of October 3, 2023, western Nepal experienced three significant earthquakes. The epicentre of these earthquakes was located in the Bajhang District. This report includes brief overview of the earthquake incidents, initial information about damage and losses, relief support to victims and discusses observed issues that can be important to consider in responding to future disasters.

## **1.1 Overview of Incidents**

The first earthquake struck at 14:40 local time, with a magnitude of 5.3. Just 26 minutes later, at 15:06, a second, more powerful earthquake with a magnitude of 6.3 shook the region. Then, seven minutes after the second quake, at 15:13 local time, a third earthquake with a magnitude of 5.1 occurred. Within a span of 15 hours (Table 1), there were a total of 12 earthquakes ranging from 4.1 to 6.3 in magnitude, all originating from the same epicentre.

The National Earthquake Monitoring and Research Centre (NEMRC) reported that following the major earthquakes on October 3, the region experienced over one thousand aftershocks, many of which had magnitudes below 4.0. Major earthquakes in the region between 03 and 12 October, 2023 are listed in Table 1 below.

Table 1. Major earthquakes (above 4.0 magnitude)

Date		Time		Epicentre		Magnitude	Epicentre Place
Nepali	AD	Local	UTC	Latitude	Longitude		
26/06/2080	12/10/2023	1:51	20:06	29.49	81.25	5.0	Bajhang
26/06/2080	12/10/2023	00:31	18:46	28.48	83.21	4.4	Baglung
25/06/2080	11/10/2023	00:22	18:37	29.61	81.19	5.2	Bajhang
20/06/2080	07/10/2023	12:32	06:47	29.61	81.24	4.3	Bajhang
20/06/2080	07/10/2023	11:45	06:00	29.58	81.26	5.3	Bajhang
18/06/2080	05/10/2023	22:51	17:06	29.60	81.23	4.5	Bajhang
17/06/2080	03/10/2023	05:43	23:58	29.63	81.20	4.3	Bajhang
17/06/2080	03/10/2023	04:27	22:42	29.41	81.26	4.3	Bajhang
17/06/2080	03/10/2023	00:50	19:05	29.65	81.19	4.3	Bajhang
17/06/2080	03/10/2023	00:16	18:31	29.62	81.27	4.1	Bajhang
16/06/2080	03/10/2023	17:38	11:53	29.65	81.27	5.0	Bajhang
16/06/2080	03/10/2023	17:19	11:34	29.56	81.16	5.0	Bajhang
16/06/2080	03/10/2023	16:31	10:46	29.53	81.14	4.3	Bajhang
16/06/2080	03/10/2023	16:28	10:43	29.59	81.28	4.1	Bajhang
16/06/2080	03/10/2023	15:45	10:00	29.58	81.10	4.1	Bajhang
16/06/2080	03/10/2023	15:13	09:28	29.55	81.18	5.1	Bajhang
16/06/2080	03/10/2023	15:06	09:21	29.59	81.19	6.3	Bajhang
16/06/2080	03/10/2023	14:40	08:55	29.64	81.29	5.3	Bajhang

Source: National Earthquake Monitoring and Research Centre

While the earthquake was felt in wider regions, reaching as far west as Delhi, the most significant damage occurred in Nepal's Bajhang and neighbouring Bajura districts. One person lost their life due to a landslide triggered by the initial quake, and 21 others sustained injuries during subsequent aftershocks. The earthquake caused extensive damage to houses, schools, health centres, government office buildings, and micro-hydropower facilities. Additionally, it resulted in a complete disruption of education in the area for a week, as some local governments decided to align school closures with the upcoming Dashain holidays, with some schools remaining closed until November 18.

## 1.2 Study Methodology

The study applied mixed methods of information collection and analysis. Field observation focused only in Bajhang, the epicentre of the most quakes, where there was most impact. However, information of other affected areas has been gathered through phone calls, email and from secondary literature. Following

were the activities to gather and analyse information:

### i. Field Observation.

On October 4, DPNet Nepal deployed a team to Bajhang to assess the situation and provide decision support information to aid agencies for a more effective response. We visited affected villages in 6 of major affected local governments. We observed damage, talked to the people affected and took photographs of the situation to further analysis and reporting. We made interaction with the affected people including school teachers and management committee and discussed on what are the immediate needs and what are their strategies, what they think about the damages were whether due to poor construction and maintenance.

### ii. Stakeholder Interaction.

DPNet coordinated with various stakeholders, including local governments, humanitarian agencies, and federal government agencies such as the District Administration Office (DAO) in the affected



districts and Kathmandu. Between October 4 and 19, DPNet team made interaction at local and national level. The stakeholders include local government authorities, Chief District Officer of Bajhang, personnel of humanitarian agencies involved in relief support and sector agencies. DPNet team participated DDMC meetings. DPNet participated and organized interactions with stakeholders in Kathmandu. Discussions were focused on different aspects of earthquake, damage assessment, mobilization of relief support and understanding of stakeholder views on further and future actions to recovery and reconstruction.

### iii. Secondary Data Analysis.

Secondary data were available from concerned local government, Bajhang District Disaster Management Committee (DDMC) meeting and meeting minutes, various public media, National Earthquake Research Monitoring and Research Centre, and National Disaster Risk Reduction and Management Authority (NDRRMA) bulletins. While we collected most information about Bajhang ourselves, secondary information was utilized for other districts. For official records, we depended on local government collected data and the decision of the DDMC for the figures of damages.

### iv. Daily Situation Updates.

Building on the information from field observations and interactions, DPNet prepared and shared daily situation updates with DPNet members and national/international audience. This was continued until October 10. The information shared were based on field observations and interactions with affected families, schools, local governments, federal government agencies, and humanitarian organizations involved in disaster response with updates from the following week as well.

## 1.3 About this Report

This report offers a consolidated summary of the daily situation updates and analyses the issues and challenges identified during the initial damage

assessment, impact evaluation, and DPNet Nepal's observations. The report is divided into seven sections. Section 2 provides an overview of the disaster impacts and the affected areas, drawing on initial damage assessments and reports from local governments. Section 3 outlines a summary of damages in Bajura and other districts. Section 4 focuses on the response of agencies to the earthquake, particularly their efforts in rescue and relief operations for the most severely affected areas. Section 5 delves into the mobilization of humanitarian response and describes the processes that humanitarian agencies undertook to provide relief support. In Section 6, the document describes the identified recovery needs. Section 7 discusses the issues and challenges observed in the field, which may raise concerns about existing practices. Finally, Section 8 provides recommendations based on the findings and insights. The report includes tables and pictures presenting facts and figures sourced from observations or various cited sources.

This report is based on the findings from the initial days following the earthquake, and as such, it may not delve into the technical aspects of the earthquake and the humanitarian response in great detail. The data about damages to houses and buildings are based on rapid visual observation and information from secondary sources. Therefore, this requires detailed technical assessment and verification, which will determine the actual recovery and reconstruction needs.

Due to limited data availability and constraints, comprehensive information about all organizations and individuals providing relief support to the affected families has not been gathered. Additionally, detailed accounts of the materials, services, and any cash assistance provided to the affected families are unavailable.

Disaggregated data about specific vulnerable groups from affected communities were not available in the respective local governments. This limited to estimate urgent needs of the people in the group.

# [2]

# DISASTER IMPACT



Figure 2. Google Image of Earthquake Impact Area (approx.)

The epicentre of most earthquakes was located in the Chainpur area of Bajhang. It appears that the epicentres were consistently situated along the Seti River. The regions along the banks of the Seti River in Bajhang and the neighbouring Bajura district were the most affected. Figure 1 provides an indicative earthquake-affected zone of comparatively high impact, based on reports of damages from concerned municipalities. Areas such as Chainpur City, Sutiyan, Kuch, Paringal, and nearby villages experienced the most significant impact. Reports of earthquake effects were also observed in Bajura district, including Budhiganga, Triveni, and Badimalika Rural Municipalities. The earthquake affected approximately 200,000 people reside within the affected zone. However, the impact on the population, such as damage to houses and basic infrastructure, is relatively low.

The overall impact was influenced by the magnitude and timing of the earthquakes. The lower number of human casualties and livestock losses can be linked to the daytime occurrence of the quake and the smaller quake that preceded the larger one by approximately 26 minutes. The initial smaller quake prompted people to move to safer locations and increased their alertness, potentially reducing the impact.

## 2.1 Nature of Impact Information

One of the challenges in determining the affected areas and populations is the lack of independently verified information obtained through technical assessments. The current data is provided by local government representatives who may be influenced by the expectation of relief and reconstruction support for affected

families. The DPNet team visited many villages that were reported to have suffered significant damage. Except in a few villages where the impact was indeed high, the accuracy of the reported data on completely or partially damaged structures has risk of inaccuracy to be highly exaggerated.

The primary focus of local governments, including the DAO, has been to compile lists of households categorized as 'fully damaged,' 'partially damaged,' and, later, 'normal damage.' Since these categories lack measurable and verifiable indicators and measurement scales, there is a high likelihood of manipulation between them. For example, a household could be categorized as 'fully damaged' even if the house did not have major damage. Local governments collected damage data, with support from local police personnel where available, particularly in gathering information about earthquake damage to private houses, school buildings, health services, hydropower facilities, and other infrastructure. These data were collected, compiled by the DAO, and shared in DDMC meetings.

The initial assessment of damages and humanitarian needs took longer than anticipated, and it is still unclear what the needs of vulnerable groups are, as well as the actual number of households affected by the disaster, and whether their houses were completely or partially damaged. More emphasis was placed on counting damaged houses than on assessing the humanitarian needs of the affected communities. It's worth noting that the most affected local governments completed their assessments earlier than those less affected. However, the number of damaged houses continued to increase daily until a final list was compiled and endorsed at the DDMC meeting on October 13, 2023. Later on 19 October, Khaptadchhanna and Chhabispathivera Rural Municipalities reported additional number of completed and partially damaged private houses. Similar updates were made in Bajura district as well.

## 2.2 Physical Infrastructure Damage

The earthquakes have mostly impacted on physical infrastructures, houses in particular. The damages were associated with both magnitude of the earthquake and the physical vulnerability of the houses. The summary of damage in Bajhang as of October 19 updates is presented in Table 2 below.

**Table 2. Summary of damage in Bajhang**

SN	Name of Local Government	Private Houses		Government Buildings*	
		Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged
1	Masta Rural Municipality	410	924	17	34
2	Chhabispathivera Rural Municipality	402	789	6	17
3	Durgathali Rural Municipality	184	384	0	0
4	Khaptadchhanna RM	449	836	13	2
5	Thalara Rural Municipality	664	408	17	15
6	Kedarsyun Rural Municipality	206	848	23	0
7	Jayaprithivi Municipality	482	853	29	28
8	Bungal Municipality	73	489	9	18
9	Saipal Rural Municipality	0	18	0	12
10	Surma Rural Municipality	0	233	0	5
11	Talkot Rural Municipality	25	358	9	12
12	Bitthadchir Rural Municipality	6	0	0	9
Total		2906	6140	123	152

Source: Concerned Local Government reports, DDMC Bajhang meeting minute (October 13 and 19, 2023)

A summary of damage details in each local government in Bajhang is presented in the tables in Annex 1 of this document. DPNet team gathered information from each municipality office. However, these data were updated after the team collected the information. So, data of some municipalities in the tables may not match with their latest updates. The extent of damage continued to increase with each update, presumably with the expectation of relief, recovery and reconstruction support. Therefore, the accuracy of the information about damages to different buildings is questionable, and an independent technical assessment is necessary to determine the actual

number of buildings completely damaged and partially damaged.

In our observation, the most affected communities are along the bank of the Seti River such as Sutiyan Village (Jayaprithivi – 5), Bhopur (Jayaprithivi – 11), Chainpur (Jayaprithivi -10), Kuch (Thalara -3), Malumela (Thalara - 9), Paringal (Chhabispathivera - 1) and so on. Although completely fallen houses are few but fallen walls or big cracks in walls have made many standing houses unliveable (See Figures 2 and 3. Photo: ©DPNet Nepal/ DCA/Dinanath Bhandari). In the affected villages, the old houses and houses having weak walls are more damaged.



**Figure 3. New house damaged by earthquake, Kuch Village.**



**Figure 4. Houses with large cracks in Kuch Village**

DPNet has taken and gathered photographs of damages and impact from more than 10 affected villages in Bajhang, which are available for future analysis.

## 2.3 Displaced Families

Since there is lack of technically verified data, it is difficult to calculate number of families outside of their homes. In our observation, very few people have left cracked houses. General assumption was that the families under 'completely damaged' category would require temporary shelter support. But, it was not the case elsewhere as there is high possibility that houses with minor crack and liveable are put in that category. However, about half of completely damaged

On the other hand, people are living in the house has severe damage such as shown in Figure 4 because they do not have any alternatives and did not have any support to build a shelter. Most people are staying outside and their belongings are in the house which is reported as 'completely damaged'. These variations in the situation makes difficult to estimate how many families are actually displaced and are living outside of their home of they should stay out of the house, which is very risky to live in. A technical verification is necessary to determine whether the particular house is safe to live in or not and then the verified number of completely destroyed and damaged houses will provide number of displaced families.

## 2.4 Sectoral Damage and Loss

Except private houses and public service building, there were not significant impacts on other sectors. However, damage to these physical infrastructures has affected livelihoods and raised concerns on different humanitarian clusters. Situation based on our observation and secondary information has been summarized in Table 3. The poor infrastructure is associated with poverty and thus many of the affected families have been facing many livelihoods related problems. The earthquake has aggravated those problems and the people will suffer more than before with additional problems posed by the earthquake including damages to their houses, and schools their children are studying.

**Table 3. Summary of impacts on different sectors**

SN	Sector	Damage/Loss*
1	Water, Sanitation and Hygiene (WASH)	1 drinking water supply system damaged in Masta. Further detail assessments are necessary. Since people will be staying under tarpaulins, health related problems are likely to increase. Winterisation support such as warm clothes is necessary. Awareness and surveillance on sanitation is important in all affected communities.
2	Agriculture, food security and nutrition	Households who suffered damage to house have problem to store harvested grains. They do not have safe place and container to store. Food was not damaged by the earthquake as such. However due to persistent poverty, food security and nutrition problems exist. Specifically, nutrition support would be helpful to pregnant, lactating women and children in the affected community. Actual data needs to collect.
3	Shelter	No camps necessary to set up. However as per the reported data, about 3500 families may need temporary shelter at their homestead. Humanitarian agencies have provided basic shelter kits.
4	Health	45 health service buildings damaged of which 7 were completely damaged. Regular health service in Chainpur hospital was affected and some services were continued outside in tent. Services are significantly affected in 7 completely damaged health post, centres.
5	Education	Most of the damaged government buildings are schools. Schools were closed for 1 week initially. Some local governments have closed schools further for a month aligning with festival holidays. Schools buildings are necessary for technical assessment as soon as possible. About 7 schools need temporary learning centre arrangements to continue teaching learning.
6	Protection including child protection	The earthquake has not triggered protection issues. The communities are living in harmony since generations and we can expect no conflict within and between communities due to earthquake impact. They showed help and cooperation during the earthquake events to search, rescue and help each other. However, a precaution is important when people are living under tarpaulin outside their home.
7	Livestock	5 livestock (goat, cattle) were injured in Bajhang. Livestock are at open space due to damages to houses. Therefore, there is significant health risk to livestock such as buffalo, goat, sheep and cattle. They will be exposed to cold, frost and snow during upcoming winter.
8	Communication	No communication service damaged and affected.
9	Transport	No transport is affected. Landslide risk likely to increase, particularly in the next monsoon.
10	Energy	Not any. However, electrification in damaged houses needs to be cut off and electricity lining needs to be realigned with ensured protection. We observed many risky electricity connection in damaged houses and affected communities.
11	Market	Market has not affected as such. However, artificial price hikes are possible, such as for warm clothes, tarpaulin and so on.

# 3 EARTHQUAKE IMPACT IN BAJURA AND OTHER DISTRICTS

It was reported that three local governments viz. Badhimalika, Budhiganga and Triveni Municipality are affected in the Bajura district. Similarly, other five districts were affected in the Fast Western Province. Summary information of the districts is depicted in Table 4:

**Table 4. Summary of damage in Bajura, Baitadi, Dadeldhura, Achham, Darchula and Doti**

SN	Name of Local Government	Private Houses		Government Buildings*	
		Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged
1	Bajura	678	5092	0	28
2	Baitadi	17	14		14
3	Dadeldhura	7	5	0	0
4	Achham	1	27	1	9
5	Darchula	0	1	0	2
6	Doti	0	1	0	0

Source: Concerned Local Government reports and NDRRMA (Situation Report: October 12, 2023)

As per the information available from different sources including concerned agencies, humanitarian agencies have been sending support to Bajura as well. So far we know, as of 12 October 2023, that UNICEF has sent 400 sets of temporary shelter kits. Similarly, Nepal National Social Welfare Association (NNSWA) of Kanchanpur has sent 250 sets of shelter materials and kits, UNFPA 200 tarpaulin, solar lamp and hygiene kit, NRCS 400 blanket and 500 tarpaulins to Bajura.

We appreciate that we have not been able to gather information about all organizations, individuals who have provided relief support to the affected families.



**Figure 5. Affected people bringing basic shelter kits and other relief materials to their home**

# [4]

## SEARCH AND RESCUE

On October 3, the first quake caused one human death and few injuries. While the first earthquake of 5.3 magnitude hit the area at 14:40 local time, most people were working in their farmlands, schools were running, and offices and markets were open. Fortunately, houses were not fallen and people inside the buildings managed to escape to safety. Most sensitive were schools where students rushed out of the classrooms and some students jumped on the ground from upstairs, two were injured in Bajhang. Mostly there are two-storey school buildings in the earthquake-affected area.

According to the teachers of concerned schools that the DPNet team visited and discussed how they responded to the earthquake, teachers had gathered students on the foreground and then sent to home in groups of the villages where they belong to. In some schools, students come from a distance. The second quake of 6.3 magnitude hit the area in another 26 minutes, at 15:06 local time. So, some students were either on the school premises or on the way to their home. Head Teacher of Sunikot High School recalled the moment that they were most worried about the safety of the students who were on the way to their home. He called accompanying teachers, parents, and senior class students to ensure everyone was safe and calm. It is not possible to accompany all students by teachers. There is the risk of landslides and rock falls on the way during and following an earthquake and thereafter. Thanks to the uninterrupted communication service that helped to ensure and communicate everyone was safe.

The local people managed to ensure their own safety. Most people were out of their houses in the second quake, which was much stronger than the first and had damaged more houses. Therefore, people were

safe even if houses were damaged. Unfortunately, Gunmati Dhami (46) of Jayaprithivi Municipality – 11 were killed by an earthquake-triggered landslide. She was collecting forest products in the nearby slope. According to the compiled data at the DDMC, 21 people were injured in Bajhang. Two of them had serious injuries: Salina Joshi (07) and Pramila Joshi (14) of Jayaprithivi - 11 were badly injured while escaping to safety. They were sent to the regional hospital for further treatment after rescue and first aid. It was reported that they are recovering in the Provincial capital - Dhanagadhi.

As per updates from other districts, 5 people were injured in Achham, 2 in Bajura and 2 in Baitaidi districts (for details, see NDRRMA bulletin of 12 October 2023).

According to district authorities, security personnel were mobilized to search and rescue as well as quick assessment of the situation. The Secretary of the Nepal Red Cross Society District Chapter informed that their volunteers were also mobilized quickly to support search and rescue. It came to know that the local government officials, particularly the Ward Chairpersons and members played a crucial role in taking stock of the situation in the initial hours.

Subsequent aftershocks of 4.1 magnitudes to 5.1 magnitudes hit the area in a few-minute intervals (Table 1) on the first day forcing people to stay out of homes overnight. Fortunately, the electricity supply and communication system were intact. This provided great support to people and authorities to stay calm and communicate about situation. Since the earthquake did not have much devastation on infrastructures and impact on livelihood resources, there were no pressing humanitarian needs of the affected.

# 5

## HUMANITARIAN RELIEF SUPPORT

It came to know that local governments had initiated an initial assessment of damages along with an Initial Rapid Assessment (IRA) with the Nepal Red Cross and Security personnel. However, the assessment looks more focused on listing out fully and partially damaged houses. Since there were fewer casualties and fewer number of houses completely fallen off, enumerators seemed missing to assess immediate humanitarian needs. Initial reports, unfortunately even after 10 days, have not identified pressing humanitarian needs such as the needs of vulnerable groups. The humanitarian relief is distributed by the agencies based on the 'fully damaged' list of households prepared by the concerned local government. Although food and grains were not damaged by the earthquake, assessment of most pressing humanitarian needs like food, water, shelter, medical care, and protection were found lacking.

On the other hand, the prepositioning of humanitarian support materials was almost negligible in the district. Nepal Red Cross had about 40 tarpaulins, which were distributed on October 3 and 4. It came to know that there was nothing in DDMC stock, nor any local governments had prepositioned for disaster response. Some political leaders such as Hon. Rabi Lamichhane, Member of Parliament provided tarpaulins (it is said 40), which were distributed to families on October 4. On the day, some relief materials arrived in DAO from the provincial government, provided by UN agencies, and INGOs from Dhanagadhi and Kanchanpur.

The whole team of district administration and security were busy in preparation and management of the Prime Minister's visit on October 5 and 6. The visit also engaged local governments including leaders, bureaucrats, and political parties. So, there was not any relief provided on these two days.

On the evening of October 6, the DDMC meeting distributed relief materials to different municipalities.

These materials were provided by different humanitarian agencies considering the pressing need to respond to the disaster, some of them through provincial governments and the rest directly to the DAO. Detail of the materials distributed from the DDMC is pasted in Annex 2 of this document. These materials were not picked up by respective municipalities until the next day and some municipalities did not do it until October 9. Earlier on October 3, the DDMC meeting had decided to gather all relief materials at the DAO and the CDO to distribute relief.

Humanitarian agencies, INGOs, and NGOs in particular, raised concern about the centralization of the relief distribution and its inefficiency in responding to the needs of the victims (for example, see distribution of materials – Annex 2). Considering to the risk of failing to fulfil humanitarian needs, some agencies did not hand over materials to the DAO.

DPNet team met CDO on October 7 and suggested to having oversight of the relief distribution allowing humanitarian agencies to work with local governments. In the next day morning, there was a meeting between the CDO and humanitarian agencies facilitated by Hon. Bhanubhakta Joshi, Member of Parliament. The meeting discussed on the issues and differences with the decisions to centralize the relief distribution that excluded agencies to work with local governments and fetch relief to the victims. Other issues were about the efficiency and effectiveness of the centralized approach. The meeting decided to have a bilateral meeting between the CDO and the humanitarian agencies to resolve relief distribution issues. This meeting was held in the afternoon on the same day i.e. October 8 (See Box 1). In the meantime, the Mayor of Jayaprithivi Municipality submitted a letter of concern that the approach of centralization of relief distribution was against the constitutional mandate to the local governments.



### Box 1. Coordination meetings helped easing relief distribution

The meeting between the CDO and the humanitarian agencies discussed about resolving issues of relief distribution. Citing to the previous day's distribution of relief items from the DDMC (see Annex 2), the agencies suggested to distribute relief in sets and packages without breaking sets into pieces. The DDMC/DAO should coordinate between actors and monitor overall relief distribution in the district and humanitarian agencies should work with local governments in identifying affected families and distribution of relief. It also discussed about category of damages and type of victims to set priority to provide relief materials. Sticking on his position, the CDO informed that DDMC meeting on October 4 has decided to follow one-door system and requested local governments to send data of earthquake damages and affected families. He also informed that so far he had received such information from 2 local governments (Masta and Durgathali) only. He asked humanitarian agencies about their commitments – whether it was for relief only, will work for longer or they will further continue to support the reconstruction of earthquake damage.

The agencies were informed about their commitment and status. Most of the agencies would work beyond relief and they were waiting for assessment reports to plan for arranging support to recovery and reconstruction as well. Agencies also updated about their current stock of relief materials available in the district and the potential to add on if required. The agencies reiterated their views that they would prefer going to the affected communities than to handing over materials at the DAO.

DPNThe et team drew the attention of the participants that some important issues are not in priority such as reconstruction of damaged kitchen, toilets in schools as well as Temporary Learning Centers (TLCs). Since schools are opening from the day, these are important issues to consider with priority. Similarly, the team reminded that the data of specifically vulnerable groups in affected families were missing. This should be put in priority and data collected. CDO noted this concern regarding database. Similarly, it was suggested strengthen DEOC for database management.

After discussion with the humanitarian agencies, the CDO agreed to resolve the issues through next DDMC meeting. It was agreed as following:

- DAO to follow up with local governments for detail database of damages due to earthquake
- Agencies to support LGs to prepare and share database with DAO
- CDO to organize DDMC meeting after data is available - anticipated meeting was the next day
- Both parties (CDO and humanitarian) to meet next day
- CDO to resolve issues and challenges faced by humanitarian agencies regarding relief distribution and facilitate to distribute support/relief materials via local governments informing DAO about the details of the materials being distributed.

The DDMC meeting was called for October 9. The meeting decided to let humanitarian agencies to work with local governments and distribute relief. The allocation of the agencies in different local governments is as in the following

**Table 5. As of the October 13 update, humanitarian agencies have covered all households with basic shelter items and some additional relief materials such as food and utensils. It is notable that there are variations in the contents and standards of relief items between the agencies.**

SN	Name of Local Government	Agency	Remarks
1	Masta Rural Municipality	DCA/NNSWA/UNFPA/NRCS	
2	Chhabispathivera Rural Municipality	NRCS	
3	Durgathali Rural Municipality	UNICEF	
4	Khaptadchhanna Rural Municipality	Plan International Nepal	
5	Thalara Rural Municipality	UNICEF, UMN	
6	Kedarsyun Rural Municipality	World Vision International	
	Jayaprithivi Municipality		
	Ward # 4, 5, 9 and 10	Save The Children Nepal	
7	Ward # 1, 2 and 3	UNFPA/NRCS	
	Ward # 6, 7, and 8	World Vision International	
	Ward # 11	NRCS	
8	Bungal Municipality	NEEDS Nepal	
9	Saipal Rural Municipality	NRCS, Others if any	
10	Surma Rural Municipality	UNICEF	
11	Talkot Rural Municipality	NRCS, other if any	ENUDEC/ADRA
12	Bitthadchir Rural Municipality	NRCS, Others if any	

Source: DDMC meeting minute and personal communication with respective humanitarian agencies

The providence of relief materials was significantly delayed for three reasons and is still not in basis of humanitarian principles. Firstly, the initial assessment report was delayed by the local governments. It was also affected by the PM's visit. Secondly, the DDMC decided to centralize the relief distribution which was not appropriate and created confusion among humanitarian agencies whether the relief would reach to those in need. The government had not invested anything on relief but was trying to administer humanitarian agencies. Finally, local governments and authorities focused on collecting house and building damage data without considering the need of disaggregated data of the affected population including vulnerable groups within the affected population and their needs to reduce vulnerabilities. Yet, this issue is not addressed completely.

Humanitarian organizations including UN Agencies, INGOs and NGOs (including Nepal Red Cross Society) started distributing basic shelter materials to earthquake-affected families from Tuesday October 10 after 7 days of earthquake after the DDMC meeting endorsed/allocated working area for different

agencies. UNICEF shared that they will support to establish Temporary Learning Centers (TLCs), building toilets and supporting with stationeries to the students. As shared in the DDMC meeting, there are 80 classrooms damaged in Thalara Rural Municipality alone. Similarly, 10 toilets are damaged. In Thalara, Municipality will provide wood and frames, and UNICEF will provide support for roofing and flooring for 30 to 35 TLCs in this Rural Municipality. Similarly, UNICEF will provide stationery to 700 students. Similarly, support will be provided to Jayaprithivi Municipality as well. In Jayaprithivi Municipality, 29 school buildings are completely damaged and other 28 partially damaged.

District Public Health Office (DPHO) mobilized 3 psychosocial counselling teams in the affected municipalities. These teams were supported by I/NGOs as the representative from DPHO informed in the DDMC meeting. The DPHO is collecting data of pregnant, lactating mothers, PWDs and others vulnerable groups in the earthquake affected area such that specific support can be rendered to these persons. The governments had not invested anything in providing relief to affected families until October 15.

# [6] RECOVERY NEEDS



Figure 6. Bal Bikas Secondary School Building damaged by earthquake

## 6.1 Sectoral Recovery Needs

Most pressing recovery needs are in housing sector. Affected people need to build or repair their houses as soon as possible. It is risk that the process may delay by following traditional approach of 'recovery phase' and 'reconstruction phase'. Considering the scale of impact, recovery should be aligned with reconstruction such as training to safe building skills, technology adoption and cash for work and reconstruction. This will help affected families to maintain and recover their livelihoods.

Secondly, recovery of health service and teaching learning is urgent and important. Governments should give specific attention to build health centres and school buildings damaged by the earthquake.

Finally and urgently, supporting to specific vulnerable groups to prevent further deterioration of their conditions worsened by the earthquake. Special focus needs to be given to address cold season problems. A detail assessment is necessary to find out number and situation of households, families and individuals in the specific vulnerable groups in the earthquake affected area.

## 6.2 Cross Cutting Issues

A number of issues have surfaced linked to disaster risk reduction, preparedness and response. The issues are not endemic to the area but are equally common throughout the country. We discuss those issues in further detail in Section 0 below.

## 6.3 Suggested Sectoral Recovery Interventions

Reconstruction of damaged houses, schools and health service buildings should be aligned with community recovery such as involving communities in reconstruction work, training them for safe construction and generating employment and income through entrepreneurships like cutting stones to walls and brick manufacturing. Education sector and local governments should put restoration of schools in priority.

Focusing to specific vulnerable groups and economically marginalised families, livelihood and income generation support is important in building resilience beyond the support to recovery. Therefore, every sector shall identify weakness that led to worse disaster impact and devise support to the families and sector to strengthen risk reduction and preparedness at individual, family, community and local government level.

# [7]

## ISSUES AND CHALLENGES



**Figure 7. Traditional houses to accommodate livestock on the ground floor**

Several issues have come on the surface about disaster preparedness and response. For last a decade or so, both government and agencies have been preparing Disaster Preparedness and Response Plans (DPRPs) at the local, provincial, and federal level. As a continuation of the practice, the DPRPs are prepared at the district level as well. Earthquake is a priority hazard in the DPRPs. However, these efforts were not found effective in Bajhang in this earthquake, as if, preparations were focused and limited to the preparation of documents and their revision year by year. Some other issues observed were as follows:

### **Data Accuracy:**

Since the governments were focused on listing households into 'fully damaged' and 'partially damaged'

in view of government's recovery and reconstruction support grants, the data accuracy comes into question which have been prepared without technical and independent assessments. The damage data is highly exaggerated. It is also noted that partially damaged houses are recorded as fully damaged. Therefore, independent field verification is essential at least before starting recovery/reconstruction. The discrepancy in data and reality decreases trust in the government reporting system and Local Governments. In some communities, we were told that the reporting is made with political bias too.

Coordination and screening of affected families at different scales is looking like a challenge as everybody is claiming affected severely and their

house to be put in the fully damaged category. This is a lack of clear guidelines and weak enforcement of available guidelines and procedures in initial damage assessment.

### **Comprehensiveness of Data:**

One of the major problems is the lack of disaggregated data on the affected population including vulnerable groups such as children, elderly, disabled, and pregnant and lactating mothers among affected populations. Despite request to the authorities, this information collection was not in priority at least until October 13, the day the DDMC published a compiled summary of the initial assessment of damage (Table 2).

A significant challenge in data collection stems from the outdated Disaster Assessment Guideline of 2015. Since its introduction, the country transitioned to a federal structure plus new requirements like the need for comprehensive disaggregated data. This guideline, as it stands, no longer addresses current federal structure and needs effectively. The absence of an updated guideline from the government poses a dilemma for local authorities and development agencies as they struggle with determining the standard protocols for data collection. Due to the lack of comprehensive and disaggregated data about affected families, there have been difficulties in identifying specified needs including protection concerns. Government should revise the Disaster Assessment Guideline in view of:

- Collection of disaggregated data of the affected population including number and status of vulnerable groups among affected households.
- Identification of protection concerns such as displaced populations, potential gender-based violence, and child protection.
- Affected sectors, essential goods and services in the affected communities such as whether food, kitchen utensils is damaged or not in the disaster.
- Actual and urgent needs within humanitarian support such as whether food is immediate need or roofing material or both. Similarly, what sort of support is necessary and important to bring from outside such as whether dry food or ready to eat food or set of food materials.

Issues of specific vulnerable groups was introduced as agenda in the meeting of DDMC but it was not discussed later as the meeting focused on relief and consumed much time in agency allocation and calculation of relief items vis a vis damage reports. The issue of specific vulnerable groups is yet to be understood by DDMC, particularly the CDO and local government elects.

### **Protection to and fulfilling Needs of Specifically Vulnerable Groups:**

Although there is not serious issue reported about protection, this matter looks forgotten in disaster preparedness by local governments. Needs of specifically vulnerable groups must have been ignored as they have not assessed during initial assessment. Assessment process, tools and skills should be improved. The data was filled in differently by different local government and all missed to include number of PWDs, children, old age, pregnant and lactating women etc. in their reports.

### **School Resumption and Continuation of Teaching-Learning:**

As per International Network for Education in Emergencies (INEE)'s Minimum Standards for Education, education should resume in two weeks. This is considered for mega disaster or during crisis situation. The Bajhang earthquake is not major disaster although many school buildings are damaged and risky to run classes in them. However, it is not the situation to wait for two weeks to resume teaching learning. Unfortunately, resumption of schools is not priority of authorities. It was even found that they did not put in priority the rebuilding of toilet and drinking water supply. Surprisingly, some of the humanitarian agency officials were found saying, 'It is after two weeks'. Therefore, it is important to orient all concerned to take response and recovery actions with respect to the scale and impact of disaster. Education must be in priority.

School resumption and continuation of teaching-learning are not coming into priority as they should be. There is top urgency to build TLCs where building is damaged. In some schools, kitchen and other facilities for day meal to children are damaged. Humanitarian

agencies should also put this in priority but they are focusing their relief support into families in traditional way. This earthquake impact is peculiar that we focus on school resumption together with household relief. There should be discussion in clusters, federal education clusters in particular, how we deal in different nature and scale of disasters.

### **Need versus Supply:**

It looks that immediate needs of tarpaulin and other shelter kit are fulfilled based on the commitment. The providence may take a week or more. Mostly, agencies are supporting with shelter kits. However, they are also supplying with other materials like biscuits following their traditional way of response. The earthquake has not damaged grain nor kitchen utensils of private houses. It came to know that basic needs generated due to earthquake are warm clothes and shelter. If there is food problem in an earthquake affected family, it is due to food poverty not due to food damage by or as impact of the earthquake. Therefore, agencies should review their response package and provide as per need of the affected communities. Considering to live outside home, roofing materials, light/lamp, blankets are necessary, also considering the forthcoming winter.

The Sphere standards serve as essential benchmarks and guidelines, crucial not only during response efforts but also extending into recovery phases. Adherence to these standards ensures not just the basic necessities for preserving lives and well-being but also facilitates the efficient allocation of relief and recovery resources. To tailor aid effectively, local requirements should be assessed, and relief materials adjusted accordingly to align with provision of Sphere standards and address specific local and community needs.

Based on the interaction with the people who received relief support, it is unlikely that the people will use tarpaulins and other shelter materials to build a temporary shelter. They have either already used some materials which they already had to build temporary (a makeshift) or living in the cracked houses. Since the data on damage is highly manipulated in view of receiving relief and reconstruction grants, the need for temporary shelter, as a whole, is less than the data

shows. Proper utilization of the materials provided is important issue. Therefore, if further assistance is being planned, agencies could provide mattress and warm clothes focusing on the economically marginal communities/families.

Currently more focus is given to imported materials. There is opportunity to build temporary shelter from the materials of damaged houses or buildings, and this should be in priority.

### **Cash-Based Approach:**

Cash based approach could be most efficient in such nature and scale of disaster where response requirements are diverse and needs and priorities of most vulnerable groups are not well considered by the authorities. It was found that there is lack of basic economic infrastructure like bank accounts and database of specific vulnerable groups. That should be strengthened in each local government such that cash-based approaches can be easily adopted in future.

### **Psychosocial Counselling and Awareness Raising:**

While identifying most vulnerable people among affected population and supporting them with what they need is utmost important, psychosocial counselling along with protection is also important. Still there are superstitions about earthquake and people remained terrified due to aftershocks coming. Local governments should prepare volunteers in psychosocial counselling as well. Mass awareness is also important. Use of media including social media and FM radios looks important to provide awareness messages. There is lack of general awareness about earthquake, weak infrastructure, and risk. It is important to be aware each household how their house got damaged and how that can be prevented in the future.

### **Building Back Better, Mason Training and Building Codes:**

Most of the buildings that collapsed or developed cracks were the result of poor construction practices. Primarily, issues were found in the quality of walls,

where both inner and outer walls were poorly connected, among other factors. Consequently, it is essential to promptly assess the factors contributing to these damages by enlisting technically proficient, experienced, and socially adaptable experts.

One immediate action to provide support is to train masons and involve households (HHs) in the reconstruction process. This could involve cash-based approaches such as cash-for-work programs or service procurement to train local residents in constructing earthquake-resistant houses using locally available materials. Therefore, giving top priority to mason training is imperative. Many of the cracked houses still possess usable wood and other materials that can be employed in reconstruction. It's crucial to offer design options that allow local residents to maintain the traditional architectural styles of their houses. In rural areas, it is common practice to keep cattle and livestock on the ground floor while people live on the upper stories of their homes (Figure 7).

Therefore, an important consideration for reconstruction support is whether the government will account for both local needs and practices, as well as earthquake safety and other potential hazards, or if it will mandate a specific construction model to construct two-room house, as was done in the 2015 earthquake reconstruction. With various design choices and prototypes available to adapt to local architectural styles, the enforcement of building codes must take precedence during the reconstruction process. Each local government should be responsible for ensuring that new houses are constructed using appropriate technologies.

### **Reconstruction Leading to Recovery:**

Generally, the recovery phase precedes reconstruction. However, in this event, it is important to think about bringing both alongside and reconstruction supporting recovery as well. There has not been severe damage to employment or basic livelihoods. Therefore, livelihood recovery can be achieved through supporting reconstruction such as training mason and helping households to reconstruct their damaged houses by using earthquake-resistant technologies.

Although LG leaders regard the importance of trained masons, they have not put this agenda as a priority. Nor do the supporting agencies have priority to it. It was reported that some HH wanted to reconstruct and repair their houses but it is feared that they might go with the weak construction again.

Since the earthquake has not posed a big humanitarian crisis, a technical assessment and reconstruction process should start as soon as possible. The situation will get worse if reconstruction is not made before the next monsoon. Many houses are at risk of falling due to rain as their roof are tattered and walls cracked. We feel that the reconstruction process must start soon and be at a speed such that people are under their house roofs before the next monsoon. There is not too much focus on relief once they get temporary shelter including grain storage facilities whose houses have been damaged completely.

Looking at the impact of the earthquake, recovery need is very less, almost negligible. Therefore, agencies should get out of the box from the traditional process and advocate/support the government to speed up the reconstruction process. Reconstruction support could be possible in the next 8 months before the next rainy monsoon season if local governments are assigned responsibilities and accountabilities. Local governments should be accountable for screening of fully or partially damaged houses. However, if the governments carry on the contemporary everlasting process as adopted in the reconstruction of landslide, flood-damaged houses, it may take years.

### **Lack of Longer-term Plan:**

Neither local governments nor the DDMC, have any plan beyond relief. There should be a strategy in place for technical assessment, recovery, and reconstruction. Similarly, focus should be given to landslide risk due to the earthquake impact. The 6.3 magnitude earthquake, followed by numerous aftershocks, has rendered the already fragile landscape even more vulnerable to landslides. Numerous cracks have appeared across various areas. To prevent further damage and potential threats to households, infrastructure, and human lives, it is important to address these cracks

promptly. Implementing ‘low-cost landslide mitigation technology’ can serve as an immediate and cost-effective solution to seal these cracks and safeguard the community. Investing a modest amount in such initiatives can result in significant savings in terms of both assets and lives.

In Nepal, there are various plans designated for DRRM at the local level such as DPRP, Local Disaster and Climate Resilience Plan (LDCRP), Local Disaster Risk Management Plan (LDRMP), Emergency Response Plan (ERP), Contingency Plan, District Disaster Preparedness and Response Plan and so on. Similar plans are at the provincial and federal levels as well. Even there are additional plans at the federal level with different names. Disaster events provide an opportunity to reflect on whether and how these various plans have been useful in building response capacity.

### **Scale of Disaster and Agency Engagement:**

While this is not a mega-disaster, local governments should have been encouraged to manage it on their own. Massive engagement of CDO controlling the situation and process and international agencies to take up relief providence has undermined the international principles and authority allocation of Nepal’s constitution on DRRM. LGs are not assuming their sole responsibility for managing the disaster, nor have they led the process. There is no sign of a federalized approach in responding to this earthquake

in Bajhang. It is also a matter of discussion whether international agencies should engage in responding to this level of disaster. This could be a matter of political economy analysis for humanitarian and DRR agencies.

Local governments should be assigned with responsibilities and accountabilities to manage this level (moderate) of disaster but the situation looks like all 3 level governments will engage unnecessarily as well as international agencies at the forefront. It ultimately increases dependency, over expectation and prevents resilience at the local level.

Government investment in relief is almost zero in Bajhang. Since humanitarian agencies have provided relief materials, it is normal that the government should not duplicate or spend on unnecessary things. However, it is nothing done after the PM declared support (15,000 and 50,000) for temporary shelter and reconstruction. Government should urgently build permanent classrooms as well.

On the contrary, local government representatives, CDO, and other federal government officers were asking humanitarian agencies for the latter’s assurance of their support to reconstruction although it was not documented in meeting minutes. Although the pressure on NGOs to take responsibility for reconstruction is not surprising as it happened in other disasters as well, it indicates that the government is expecting or being dependent on NGOs/international agencies for everything on DRRM.



# 8

## RECOMMENDATIONS



**Figure 8. Sunikot High School conducts exams in assembly point (L) and their class room (R).**

As a trusted platform for different agencies, DPNet should remain prompt in situation analysis, reporting, and field coordination in future events as well. Having a multi-disciplinary team and resources prompt to mobilize quickly is important.

Mostly the recommendations are built on the issues and challenges discussed in section 6 above with observation of impacts and humanitarian response including coordination between agencies. The following recommendations are points of thought based on our experience of situation analysis in this event. There are many things to assess thoroughly and understand the technical, social, political, and economic aspects of this earthquake and its response actions coming (or not coming) in the future.

We strongly recommend to improve the initial damage and need assessment process, approach, tools, and building capacity of local government officials and volunteers to use those tools in different nature and scale of hazards/disasters. There should be clear, measurable, verifiable indicators and scale to categorize damages, such as fully and partially, to infrastructure where there is a case of physical damage.

Maintaining the accuracy of data regarding impact – damage and loss, in particular, is very important. This has been an increasing problem in recent years in each type of disaster. This is ultimately leading to failure of disaster response, recovery, or building back better. Local governments are not strong enough to maintain accuracy due to expectations and pressure from the people to put in a higher sensitive category to ensure that they receive greater financial support. Clear delineation of the roles, responsibilities, and accountability of disaster risk reduction and management functions between federal, provincial, and local governments as well as their sector-specific agencies can minimize this problem. There should be clear guidelines dividing the roles of different levels of government in different-scale disasters based on their nature and impact. Priority should be given to local government to prepare and respond to the disaster. Unnecessary engagement of federal agencies and international agencies should be minimized.

Issues of vulnerable groups are not in priority. It must be in priority in all scales and the nature of disasters. Authorities must be made responsible for maintaining an updated database of vulnerable groups in the local government and DDMC such that they can be reached

with rescue and relief support quickly after a disaster. NGOs should make it in priority to advocate and support governments.

Cash-based approaches are still not easily accepted by the government authorities while they provide cash as relief and reconstruction grants. It is important to understand that providing cash is also equally, even better important to purchase relief materials and services. This is not to say, that all responses are to be in cash. Where appropriate, cash should be the priority.

Education continuity is not in priority after any disaster. Closing school is taken so easily. This malpractice should be abolished and the resumption of teaching and learning should be in priority. Humanitarian agencies also should come out of 'after two weeks' thinking and insist as well as supporting the restart of schools as soon as possible. Building toilets, and classrooms and reconstruction/repair of drinking water systems should be part of the humanitarian response. Education cluster members should focus on reinstating teaching and learning rather than distributing food items or shelters, which the other agencies could do.

The supply of humanitarian aid is not often harmonized with local needs. This is difficult to meet the needs of supplies from outside. However, this can be resolved to a great extent if the initial assessment is comprehensive and humanitarian support is informed in time about what is required and what is not as relief to the affected persons and families. In future preparedness, there should be discussions on need versus supply and availability of local materials and services that can be utilized in disaster response. The Sphere standards would be better specified and contextualized for different natures and scales of hazards.

Building back better and implementation of building codes has not yet reached many local governments. This should be mandatory. Training mason is most important to achieve this objective. Most of the houses damaged were due to poor construction of walls and lack of proper ties between walls and roofing. Reconstruction must be aligned and adapt to local architecture of housing which is built on centuries of practices of agriculture, livestock keeping, and other factors. However, wrong practices and structures need to be avoided even if they are traditional and embedded into community culture.

It is crucial time to quickly launch a detailed technical assessment and start reconstruction to utilize the time window before the next rainy season. Government agencies should be mindful of this, and NGOs also should advocate and support early reconstruction. However, this looks like an ambitious recommendation amidst the list of damages.

A longer-term reconstruction plan could help governments. It is also important to recall that DPRPs have not been useful from their application point of view. Therefore, a critical review is necessary to reflect the output and outcome of various plans with different names like DPRP, LDCRP, LDMP, and so on. It came to know that development partners have been developing various DRR and CCA related policies and plan but their implication is still questionable.

Disasters must be categorized based on their nature and scale of impact. Local and province governments should be assigned with priority to tackle up to large-scale disasters. The federal government and international agencies should focus on preparing for mega-disasters and building the capacity of local and provincial governments to prepare for and respond to small to large-scale disasters

## Annex 1. Ward-wise Summary of Damage in Municipalities, Bajhang

Table 6. Summary of damage details of Khaptadchanna Rural Municipality

Ward #	Private House			Government Building		Other Damage	Total Family
	Completely Damaged	Partially Damaged	Normal	Completely Damaged	Partially Damaged		
1	49	64	71	0	0	0	1161
2	57	68	48	0	0	0	593
3	62	48	39	0	0	0	718
4	44	122	244	0	1	0	2262
5	62	175	254	0	3	0	0
6	77	66	143	5	1	0	1755
7	98	293	0	9	0	0	1953
<b>Total</b>	<b>449</b>	<b>836</b>	<b>799</b>	<b>14</b>	<b>5</b>	<b>0</b>	<b>8442</b>

Table 7. Summary of damage details of Chhabispathibhera Rural Municipality

Ward no	Animal		Private Building		Government Building		Other
	Injured	Missing	Completely Damaged	Partially Damage	Complete Damaged	Partial Damage	
1			216	362		8	
2			11	71	4	1	
3			21	109	1	3	
4			63	80	1	1	
5			55	106		2	
6	3		25	47		1	
7			11	14		1	
<b>Total</b>	<b>3</b>		<b>402</b>	<b>789</b>	<b>6</b>	<b>17</b>	<b>0</b>

Table 8. Summary of damage details of Thalara Rural Municipality

Ward no	Private Hospital		Government Buildings		Human		
	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged	Death	Injured	Missing
1	2	39					
2	6	17					
3	33	47					
4	10	59		3			
5	4	9	1				
6	18	26					
7	135		3			1	
8	6	125	3	3			
9	447	86	10	8			
<b>Total</b>	<b>661</b>	<b>408</b>	<b>17</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>0</b>

In Thalara Rural Municipality, 81 classrooms are reported damaged. This affected teaching-learning of 740 students of grade 1-5 and 860 students of grade 6 and 7. Similarly, 8 school toilets are damaged. Drinking water system is damaged in three schools.

Table 9. Summary of damage details of Bithadchir Rural Municipality

Ward No	Private House		Government Buildings	
	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged
1	-	-	-	-
2	-	-	-	1
3	-	-	-	-
4	-	-	-	3
5	-	-	-	1
6	-	-	-	-
7	1	-	-	2
8	-	-	-	1
9	5	-	-	1
<b>Total</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>9</b>

Table 10. Summary of damage details of Saipal Rural Municipality

Ward No	Private Houses		Government Buildings		Human		
	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged	Death	Injured	Missing
1	10	13	1	2			
2	3	5		2			
3	0	21		2		1	
4	4	26		2			
5	1	4	0	4			
<b>Total</b>	<b>18</b>	<b>69</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>0</b>

Government buildings are generally school building, ward office, and health post buildings.

Table 11. Summary of damage details of Durgathali Rural Municipality

Ward No	Private Buildings			Total	Remarks
	Completely Damaged	Partially Damaged	Minor impact		
1	9	59	35	103	Government Building Data not available
2	22	45	209	276	
3	27	141	152	320	
4	44	67	2	113	
5	40	20	160	220	
6	8	3	64	75	
7	34	49	63	146	
<b>Total</b>	<b>184</b>	<b>384</b>	<b>685</b>	<b>1253</b>	

Information about impact on school building and other government/public infrastructure is yet to be available from Durgathali RM.

Table 12. Summary of damage details of Bungal Municipality

Ward No	Human Casualty		Private Houses		Government Buildings		School Buildings	
	Dead	Injured	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged
1			6	134			2	3
2			63	186			4	
3			3	64			2	
4				14		2		2
5				24				3
6				5		1		1
7				10			1	4
8		1	2	10				3
9		1		9				2
10				4				
11				19				
<b>Total</b>		<b>3</b>	<b>74</b>	<b>479</b>	<b>0</b>	<b>3</b>	<b>9</b>	<b>18</b>

Table 13. Summary of damage details of Surma Rural Municipality

Ward No	Private Houses		School Buildings		Other damage
	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged	
1	-	10	-	-	-
2	-	15	-	-	-
3	-	9	-	-	-
4	-	155	-	4	-
5	-	14	-	-	-
<b>Total</b>	<b>0</b>	<b>203</b>	<b>0</b>	<b>4</b>	<b>0</b>

Table 14. Summary of damage details of Kedarsyun Rural Municipality

Ward No	Private Houses			Government Buildings		Other Damage
	Completely Damaged	Partially Damaged	Minor Impact	Completely Damaged	Partially Damaged	
1	22	139	213	3		
2	23	120		4		
3	9	134		4		
4	8	80		4		
5	15	7		5		
6	22	18		3		
7	18	77				
8	50	155				
9	39	118				
<b>Total</b>	<b>206</b>	<b>848</b>	<b>213</b>	<b>23</b>	<b>0</b>	<b>0</b>

Table 15. Summary of damage details of Masta Rural Municipality

Ward No	Private Houses		Government Building		School Buildings		Health Building	
	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged
1	53	362	3	6	1	6	2	
2	96	174	2	7	2	5		
3	27	69	2	3		2		3
4	112	80	6	3		4		1
5	30	70	1	2	1	1		
6	55	95	2	1	1	1	1	
7	20	74	10		3		2	2
	<b>393</b>	<b>924</b>	<b>27</b>	<b>22</b>	<b>8</b>	<b>19</b>	<b>5</b>	<b>6</b>

Similarly, as of October 8, Municipality Administration building is also reported completely damaged. 1 drinking water supply system is completely damaged and another partially damaged in Ward No 3. One community building is completely damaged in Ward No 5 and another one partially damaged in Ward No 1. Three temples were reported completely damaged in Ward No 7.

Table 16. Summary of damage details of Jayaprithivi Municipality

Ward no	People			Private Houses		Government (school) Buildings	
	Dead	Injured	Missing	Completely Damaged	Partially Damaged	Completely Damaged	Partially Damaged
1				51	300	1	3
2	0			0	136	1	0
3	0			54	250	1	3
4	0			10	55	1	1
5	0			30	300	1	2
6	0			30	60	0	1
7	0	2		30	400	0	3
8	0			15	125	0	3
9	0			60	200	0	1
10	0	1		35	150	1	1
11	1	3		80	380	0	4
<b>Total*</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>395</b>	<b>2356</b>	<b>6</b>	<b>22</b>

Source: Jayaprithivi Municipality Office.

Note: \*Data as of October 8, 2023. These data were updated on October 13.

One human death in the earthquake occurred in this municipality. Gunmati Dhama (46) was killed by earthquake triggered landslide. Two injured: Salina Joshi (07) and Pramila Joshi (14) were brought to the Provincial capital Dhanagadhi for further treatment.

**Table 17. Summary of damage details of Talkot Rural Municipality**

Ward No	Private Houses		Public (govt) Buildings	
	Fully damaged	Partially damaged	Fully damaged	Partially damaged
1	8	43	4	0
2	0	7	1	1
3	11	81	0	0
4	1	41	1	0
5	0	9	3	0
6	3	31	0	3
7	0	46	1	2
<b>Total*</b>	<b>23</b>	<b>258</b>	<b>10</b>	<b>6</b>

Source: Talkot Rural Municipality Office.

Note: \*Data as of October 8, 2023. These data were updated on October 13. Updated summary figures are given in Table 2.

Detailed technical assessment and proper verification of damage is yet to be done and is likely to take much longer time than we initially thought.

**Table 18. Health Service Building damaged by earthquake**

SN	Local Government	Completely Damaged	Partially Damaged	Total	Remarks
1	Masta RM	3	5	<b>8</b>	
2	Chhabispathivera RM	1	10	<b>11</b>	
3	Durgathali RM	0	4	<b>4</b>	
4	Khaptadchanna RM	0	1	<b>1</b>	
5	Thalara RM	1	0	<b>1</b>	
6	Kedarsyun RM	0	1	<b>1</b>	
7	Jayaprithivi Municipality	2	10	<b>12</b>	
8	Bungal Municipality	0	1	<b>1</b>	
9	Saipal RM	0	3	<b>3</b>	
10	Surma RM	0	0	<b>0</b>	
11	Talkot RM	0	2	<b>2</b>	
12	Bitthadchir RM	0	0	<b>0</b>	
13	(District) Health Office Bajhang	0	1	<b>1</b>	
	<b>Total</b>	<b>7</b>	<b>38</b>	<b>45</b>	

Source: DPHO, Bajhang

A total of 45 health service buildings, encompassing health posts, birthing centers, and health centers, have been impacted. Seven buildings are reported completely damaged, while other 38 have sustained partial damage. It's notable that in Jayaprithivi Municipality, a tragic incident occurred where a health worker lost their life due to a landslide induced by the earthquake. Meanwhile, areas like Surma and Bitthadchir Rural Municipalities reported no damages to their health buildings. This is preliminary data; a comprehensive technical assessment of the damages is yet to be conducted. The timeline for initiating and completing this assessment remains undetermined.

## Annex 2

### Relief Items Distributed from DAO, Bajhang

#### निर्णयहरू

##### निर्णय नं.१

विगतमा जिल्ला विपद् व्यवस्थापन समितिको बैठकले गरेका निर्णयहरूको विक्षेपण एवं समिक्षा गरियो ।

##### निर्णय नं.२

मिति २०८० असोज १६ गते दिउँसो २:४१ र ३:०६ बजेको समयमा यस जिल्लामा आएको भूकम्पबाट प्रभावितहरूको लागि जिल्ला विपद् व्यवस्थापन समितिमा प्राप्त देहायका राहत सामग्रीहरू पालिकास्तर देहाय बमोजिम वितरण गर्ने निर्णय गरियो । साथै भूकम्पको प्रभावलाई मध्यनजर गरी जिल्ला अस्पताल बझाङमा ३ वटा टेण्ट र ५ वटा मेट्रेस, स्वास्थ्य कार्यालय बझाङमा २ वटा टेण्ट र २ वटा मेट्रेस र नेपाली सेनामा १ वटा टेण्ट वितरण गर्ने साथै सदरमुकाम चैनपुर बजारका अन्य प्रभावितहरूको लागि २० थान त्रिपाल र पत्रकार महासंघ बझाङमा १ वटा टेण्ट र २ वटा सोलार बत्ती वितरण गर्ने निर्णय गरियो ।

##### निर्णय नं.३

निर्णय नं.१ बमोजिमका राहत सामग्रीहरू जिल्लास्थित सबै पालिकाहरूले सम्बन्धित पिडितहरूलाई वितरण गरी सो को भरपाई ५(पाँच) दिन भित्र जिल्ला विपद् व्यवस्थापन समितिमा उपलव्ध गराउने निर्णय गरियो ।

देहाय

सामग्री/पालिका	चकनूची	सुनसरी	साइफल	तलाकोट	सुर्खे	गढा	बासुङखाना	दुर्गाथली	धनारा	केदारमुन्डु	विन्दुचिर
त्रिपाल	६० थान	६० थान	१८ थान	४८ थान	२८ थान	४८ थान	५३ थान	४८ थान	४३ थान	६८ थान	३८ थान
टेण्ट	५ थान	५ थान	५ थान	५ थान	५ थान	५ थान	५ थान	५ थान	५ थान	५ थान	५ थान
कम्बल	१२ थान	१२ थान	१२ थान	१२ थान	१२ थान	१२ थान	१२ थान	१२ थान	१२ थान	१२ थान	१२ थान
प्लाष्ट	८ थान	८ थान	८ थान	८ थान	८ थान	८ थान	८ थान	८ थान	८ थान	८ थान	८ थान
चाउचाउ	२ कार्टुन	२ कार्टुन	२ कार्टुन	२ कार्टुन	२ कार्टुन	२ कार्टुन	२ कार्टुन	२ कार्टुन	२ कार्टुन	२ कार्टुन	२ कार्टुन
फि-कर्म	जिल्ला अस्पताल बझाङ १ बग्डल										
NFRI	जिल्लास्थित प्रत्येक बडामा १/१ थान										
जेन्टो किस्कुट	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन
पानी खाने बोटत	जिल्लास्थित प्रत्येक बडामा १/१ थान										
टाबेल	जिल्लास्थित प्रत्येक बडामा १/१ थान										
बाली	जिल्लास्थित प्रत्येक बडामा १/१ थान										
गिलास	जिल्लास्थित प्रत्येक बडामा १/१ थान										
कचौरा	जिल्लास्थित प्रत्येक बडामा १/१ थान										
सिरानी	जिल्लास्थित प्रत्येक बडामा १/१ थान										
चाण्डिन	जिल्लास्थित प्रत्येक बडामा २/२ थान										
नग प्लास्टिक	जिल्लास्थित प्रत्येक बडामा १/१ थान										
टोपी	जिल्लास्थित प्रत्येक बडामा १/१ थान										
मेट्रेस	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन	७ कार्टुन
सोलार बत्ती	जिल्लास्थित प्रत्येक बडामा २/२ थान										
डिजेली किट	जिल्लास्थित प्रत्येक बडामा ७/७ थान										
किमोरी किट	नगरपालिकामा २०/२० र गाउँपालिकामा १०/१०										

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