

**POST-DISASTER MANAGEMENT PRACTICES IN NEPAL:
A CASE STUDY OF BAREKOT RURAL MUNICIPALITY, JAJARKOT**

Thesis Report

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Faculty of Humanities and Social Sciences,

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Rural Development

Submitted By

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Declaration

I, Sujan Chalise, hereby declare that the thesis entitled **Post-Disaster Management Practices in Nepal: A Case Study of Barekot Rural Municipality, Jajatkot**, is my original work and has not been copied, published or submitted before anywhere. All sources of information used in this document are properly acknowledged and cited, and also documented in the reference section.

I have followed all the guidelines and ethical standards, required for conducting and reporting research. Any assistance and support from the others have been clearly mentioned and recognized. I take full responsibility for the content of this research study.

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Letter of Recommendation

This is to certify that the thesis entitled **Post-Disaster Management Practices in Nepal: A Case Study of Barekot Rural Municipality, Jajarkot**; is an independent study of Mr. Sujan Chalise, which is completed under my guidance and supervision. I recommend this thesis for final evaluation and approval.

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Approval Sheet

We hereby certify that this thesis entitled **Post-Disaster Management Practices in Nepal: A Case Study of Berekot Rural Municipality, Jajarkot**; submitted by Mr. Sujan Chalise, meets the necessary scope and quality standards. The thesis has been deemed satisfactory for partial fulfillment of the requirements for the Master of Arts degree in Rural Development. The thesis has been evaluated and approved.

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Self-Declaration Letter

Plagiarism Test Report

Abstract

I conducted a research study entitled **Post-Diaster Management Practices in Nepal: A Case Study of Barekot Rural Municipality, Jajarkot** to uncover the various aspects of Jajarkot earthquake 2023. As post-disaster management is an important aspect of development, the earthquake and its reconstruction period provided a suitable research scenario. A mixed approach was employed for the study. Key Informants Interview KII was conducted for qualitative data collection and Household Survey was conducted for quantitative data collection. Among the 5586 affected households in 9 wards of Barekot RM, I took 234 households from 3 wards as the research sample.

The study found that temporary shelter has been constructed in 96.2 percent households in Barekot. Out only 24.8 percent received the second installment of Nrs. 25,000 for temporary shelter. None receives any amount for the permanent reconstruction. 99 percent temporary shelters have been completely constructed. Social life in Barekot has mostly returned to normal. While only 0.9 percent people have restored to their financial life after earthquake. The government side had taken impactful initiatives initially as 80,000 shelters have been made and Nrs. 3.5 billion is distributed to the affected ones. Non-governmental side are seen planned and structured in relief and recovery actions and are now focusing on livelihood activities. The private sector and political parties worked effectively in distributing relief materials and volunteer mobilization.

A significant gap is seen between the service delivery and people's expectation on various aspects of disaster management. Preparedness and responses were felt efficient by the people while recovery, mitigation and preparedness services delivered by the supplier's side were rated worst. In the satisfaction scale, the response services were rated satisfactory by majority of the households, while recovery and prevention services also couldn't win favor of the people.

The study comes to the conclusion that immediate needs of the people are more focused, neglecting long-term needs in the process. In this one-year period, only temporary shelters and emergency services has been constructed. The government and stakeholders should focus on far-sighted visions. Need based interventions should be initiated to empower the people and to develop community resilience to cope with the possible future disasters.

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Acronyms/Abbreviations

CPN- Communist Party of Nepal

CPN US- Communist Party of Nepal Unified Socialist

DDA – Detailed Damage Assessment

EMI - Emergency Management Institute

HDRD- Hilly Region Development Campaign

HH - Household(s)

IFRC - International Federation of Red Cross and Red Crescent Societies

INGO - International Non-Governmental Organization

IOM - International Organization for Migration

KIRDARC- Karnali Integrated Rural Development and Research Center

LAPA - Local Adaptation Plan of Action

MOHA - Ministry of Home Affairs

NDRRMA - National Disaster Risk Reduction and Management Authority

NGO - Non-Governmental Organization

NGOs/I-NGOs - Combined term referring to both types of organizations

NRA - National Reconstruction Authority

NRC - National Reconstruction Council

PDRF - Post-Disaster Recovery Framework

RPP- Rastriya Prajatantra Party

UML- Unified Maoist Leninist

UNDP - United Nations Development Program

UNFPA - United Nations Population Fund

UNICEF - United Nations Children's Fund

UNISDR - United Nations Office for Disaster Risk Reduction

WB - World Bank

WFO- World Food Organization

Chapter I

Introduction

1.1. Background of the Study

According to the United Nations Office for Disaster Risk Reduction (UNISDR), a disaster is "an event that causes widespread disruption and significant damage to life, property, and livelihoods, exceeding the ability of a community or society to recover using its own resources." The term disaster does not associate small scale happenings. Disaster disrupts the functioning of community, society, country or the entire world, for example Covid-19 pandemic. Disaster causes Human casualties and health impacts, Economic losses, Environmental damages, Displacement and social disruption, infrastructural damages, impact on education, economic inequality, cultural heritage loss, long term psychological effects, economic strain on government resources (WB, 2015). If any such incidents do not cause any deaths of people, it cannot be considered as disaster (Freudi, 2007).

Nepal is ranked one of the most dangerous countries in terms of natural hazards and disasters. A statistic of UNICEF ranks Nepal as 11th ranked in earthquake and 16th ranked in the multi hazards vulnerability around the world. Nepal is one of the most disaster-prone countries in the world due to its unique geography, with frequent earthquakes, landslides, and floods being the primary hazards. Situated on the boundary between the Indian and Eurasian tectonic plates, Nepal is highly in risk to earthquake related activity, exemplified by the 2015 Gorkha earthquake. The Indian plate moves northward at a rate of about 2 cm per year, colliding with the Eurasian plate, causing immense geological pressure (EarthSky, 2015). In Nepal, 1934 earthquake of 8 Richter scale magnitude, 2015- Gorkha earthquake of 7.8 Richter scale magnitude, 2023-Jajarkot earthquake of 6.4 Richter scale, 2008 Jure Landslide in Sindhupalchok district, 2014 Annapurna Avalanche etc. lists as major disasters with massive disruption.

Human being, in these years have faced numerous massive disasters around the world, which have caused massive loss to the lives of people. One of the biggest earthquakes, the 2004 Indian Ocean earthquake and tsunami, resulted in the deaths of approximately 230,000 people across 14 countries and caused damages estimated at \$15 billion (UN, 2005). Similarly, Hurricane Katrina in 2005 led to over 1,800 deaths and caused around \$125 billion in damages, making it one of the costliest natural disasters in

U.S. history (National Oceanic and Atmospheric Administration, 2006). The 2010 Haiti earthquake, with a magnitude of 7.0, claimed over 160,000 lives and caused an estimated \$14 billion in damages, severely crippling the nation's infrastructure (WB, 2010).

International Federation of Red Cross and Red Crescent Society, IFRC defines post-disaster management as "the set of actions taken to restore affected communities to normalcy, which includes relief operations, recovery planning, rebuilding efforts, and strengthening the capacity of communities to better cope with future disasters." Meanwhile Emergency Management Institute EMI address post-disaster management as collective efforts of stakeholders to cope the short-term damages caused as well as organized efforts to enhance the affected community to be prepared to cope with future possible disaster situations. Here, post-disaster management possess two common ideas, i.e. help the disaster affected community to address current need and prepare them to cope with future possible disaster risks.

Disaster creates impacts on long run among the affected people. Even though the disaster is caused naturally, its risk and impacts are shaped by the man-made physical, social and psychological structures (Hettige, 2022). Government's efforts and initiatives are considered as one of the most important factors on managing the post-disastrous situation. While the government efforts do not just mean short term relief and recovery, it requires re-establishment of the people on previous physical, economic and psychological situations as well. The people should feel motivated to continue their daily life with proper mitigation capacity for possible hazards in future.

Post disaster management is shaped by various factors, among them, geography and rural setting acts as major factors. Barekot RM, Jajarkot in the Karnali Province being an epicenter, was one of the hardest-hit areas. The Karnali province is known as the hardest geography and community with the extremely rural settings. The major cause of earthquake damage was reported to be weak infrastructure, such as poorly built houses and public buildings, in Barekot. Even though the earthquake was not very large, the damages were severe. This study focuses on Barekot and looks at how post-disaster management can help the affected community recover. It also explores ways to make the area stronger and safer for the future.

1.2. Statement of Problem

Nepal was hit by a medium size earthquake of magnitude 6.4 Richter scale in its northwestern part i.e. Jajarkot district of Karnali province on 3 November 2023, followed by another strong aftershock of 5.7 three days later. It caused massive damage in the epicenter and its periphery of western Nepal, also in northern part of India. The earthquake killed 157 people and injured at least 975, damaged at least 26,528 houses completely and 35,395 partially (Home Ministry, Nepal). Most damage is caused in the epicenter Jajarkot District i.e. 105 among 157 deaths and numerous injuries. The reason behind this massive damage even with the small-scale earthquake was because the region had weak infrastructure, bridges, and public buildings. Existing damage or lack of maintenance can exacerbate the impact of even a relatively small earthquake (WB, 2023).

It has been more than a year of the massive disruption. But the re-construction work has not been effectively conducted and the situation remains unimproved till date (The Annapurna Times, 2024). The initial response and recovery were given high importance in the area as then-Prime Minister Pushpa Kamal Dahal visited the earthquake-hit area in the very next morning. President Ram Chandra Paudel and other government units also visited the location to observe the damages caused, a few days later. Government immediately mobilized its units for rescue and recovery with more than 1,500 rescue officers from Nepal Police, Nepal Army and Armed Police forces (NDRRMA, 2023).

The Government enforced one window policy in distribution of relief packages to ensure the equitable distribution. Also, Government announced to provide Nrs. 50,000 in two installments to each family to make the temporary shelter. Approximately 10,000 volunteers from various social organizations, political institutions, national and international volunteering organizations were involved in the initial reconstruction process i.e. making the temporary shelter for earthquake victims (NCRC, 2023).

National Disaster Risk Reduction and Management Authority NDRRMA, under home ministry Nepal has taken the authority of entire reconstruction process, which includes financial as well as construction aspects. The last update 18 August 2024 shows that a total of 71,378 temporary shelters has been established, and Nrs. 3.16 billion has been distributed to 11,997 total beneficiaries (NDRRMA, 2024). The government side

claims that there is nothing left in terms of two installments to be provided to the victims and in terms of temporary shelter establishment. But from the victim's side, the story has been different. Media reports has been published showing many people are yet to get the second installment of the proposed relief fund (The Annapurna Post, 2024). Whereas there is no record of government homework for permanent reconstruction of the damages, not even the houses of people which is the most mandatory. A huge gap has been created between government's claims about the reconstruction process in this period and the victim's point of view on the government efforts.

In the process of post-disaster management, there occurs a wide gap between government policies and actual practice to translate the policy provisions into reality in such a way that the community people can feel a kind of change that makes their living easy (Pandey, 2021). Jajarkot earthquake is the most disastrous one, after the 2015 earthquake based on damaged caused. Hence this finding has provided a crucial hint for the research study. Pandey 2021, further claims that- the impact of the disaster is mostly shaped by the socio-economic context of the society or the household.

About 9 years ago in 2015, Nepal experienced even dangerous earthquake of 7.8 Richter scale magnitude. The massive earthquake caused widespread destruction across the country, particularly in the Kathmandu Valley, where many historic buildings and homes collapsed. Over 9,000 people lost their lives, and thousands more were injured (MOHA, 2023). The disaster also left millions of people homeless, as many buildings were damaged or destroyed, leading to a humanitarian crisis (NDRRMA, 2015). The international community responded with aid and support to help rebuild and recover from the disaster, but the scars of this tragedy are still felt today as the country continues to work on recovery efforts. As of mid-2019, it was reported that around 70% of the damaged houses had been rebuilt, but many families were still residing in temporary shelters (WB, 2019). Moreover, infrastructure reconstruction, including schools and cultural heritage sites, has continued into 2023, indicating that the full recovery and reconstruction efforts could take over a decade (UNDP, 2021). The iconic Darahara, has just been reconstructed and made open the public, can be taken as an example of how long the reconstruction process has gone. The post-disaster management practice in the past has taught a lot of lesson to the stakeholders. The process has exceeded the time frame set by the government but is not completed yet. There occurs a huge gap in the government's plan and actual delivery to be felt by the citizens. UNDP, 2021 noted that,

while significant progress had been made by 2018, many people were still living in makeshift shelters, indicating ongoing challenges in the reconstruction process(UNDP).

The study aims to find the answers to the research questions related to the current status of the reconstruction process, initiatives taken by the stakeholders and gap between people's expectation and service delivery, after the earthquake-2023 in Jajarkot.

1.3. Objectives of the Study

The general objective of the study is to evaluate the post-disaster management practices in Barekot Rural Municipality, Jajarkot. The other specific objectives of this research study are:

- i. To analyze the current status of the re-construction process.
- ii. To evaluate the initiatives taken by the stakeholders for reconstruction process.
- iii. To assess the gap between service delivery from supply side and expectation from victim's side.

1.4. Significance of the Study

There are numerous studies conducted on the 2015 earthquake and its reconstruction efforts from academic as well as non-academic backgrounds. But a notable lack of academic research focused on the recent 2023 Jajarkot earthquake is seen. The researched is motivated to make this research study due to lack of the available research studies. This study aims to be a pioneer academic literature of the Jajarkot earthquake 2023 and to providing valuable insights that are currently absent from the literature. By documenting the experiences and responses of affected communities, this research is believed to contribute to a comprehensive understanding of present disaster management practices.

It is believed that the findings of this study can serve as a crucial resource for the stakeholders and policymakers involved in disaster management process. By analyzing the effectiveness of government support systems and the experiences of victims, the research can highlight strengths and weaknesses in the current post-disaster management processes. This information is believed to be essential for shaping future policies and practices to enhance the capability of communities facing similar challenges.

The research can act as a pushing factor for governmental action in organizing disaster response efforts on time. By presenting evidence-based recommendations and highlighting the needs of the victims, this study can push three tier governments to prioritize the human needs and sustainability-oriented re-construction strategies. Highlighting the actual scenario of the situation may encourage the concerned authorities for quicker mobilization of resources and support for the impacted areas. Also, documenting the experiences of the victims, the study can help empower local communities. Understanding their needs and challenges is essential to find a way to make recovery efforts from themselves as well. The research can also facilitate community engagement in future disaster preparedness initiatives, ensuring that the voices of the affected people are heard and considered in decision-making processes.

In conclusion, this research is significant not only for its academic contributions but also for its utility to influence policy, practice, and community empowerment in the context of disaster management.

1.5. Delimitation of the Study

As the study area lies in the extremely remote district of Karnali Province-Jajarkot, there occurred a massive geographical challenge. This caused a serious problem, hindering access to the affected communities, making it difficult to conduct surveys, interviews and gather data. This also consumed excessive time and resources to travel and reach to the study area. Accommodation and logistical support have been constrained due to limited budget. Financial burdens also impacted the research timeline, resulting in delays that affected the relevance and accuracy of the data collected.

Selecting a sample size was another major challenge in the study. The disaster affected other four districts i.e. Rukum-west, Salyan, Bajhang and Bajura. While, massive harm was caused in the Barekot rural municipality, being the epicenter. Hence, there was a challenge to have proper population sample, to be generalized to the whole affected population. Even in the Barekot Rural municipality, sample selection became challenging as it consisted of 9 wards, while the epicenter Ramidanda was in the ward no. 1.

Lack of previous literature and reliable data occurred as another limitation for the research study. As the 2023 earthquake is a recent incident, there was lack of literatures to study and take references. Also, there were different statistics of the damage caused by the earthquake even in the government sites. As the data collected by the different government agencies had addressed their own statistics, it was hard to

choose the correct one. Also, the access to government bodies was another challenge to conduct the study. As the research study aimed to gather subjective information from the government side, especially with the local, provincial and federal governments, easy access to the stakeholders was a crucial challenge.

Karnali province have its local culture, language and traditions. The diverse ethnic composition of the affected communities presented cultural and linguistic challenges during data collection. Miscommunication or misunderstanding occurred as the researcher was not proficient in the local languages. This affected in the quality of data obtained and limit the depth of insights gathered from respondents.

1.6. Organization of the Study

The overall study has been organized into five different chapters. The first, Introduction chapter provides an overview of the Jajarkot earthquake of 2023, detailing its impacts and damage while linking it to global disaster management practices. It introduces the research topic, outline the research problem, state the objectives, and explain the rationale behind the study. This part has clearly mentioned why is the study is being conducted and what findings are expected to generate after the completion of the study.

Literature review is the second chapter. This chapter includes the reviews of existing literature relevant to the research topic, including previous theses, internationally recognized disaster management frameworks, theories, principles from various scholars, and relevant news articles and audio-visual materials. The literature has been categorized into theoretical and empirical reviews.

The third chapter, Research Methodology has detailed the research design and methods, including data collection, tools, and techniques. It describes how data has been collected, analyzed, and interpreted to address the research questions, ensuring the study's systematic approach, reliability, and validity while noting any potential limitations.

Data Presentation and Analysis has been introduced as the fourth chapter. This chapter presents and analyze the collected data using various software and tools. The data has been organized into lists, charts, tables, and other visual formats, depending on the nature of the data and study requirements. This has helped the readers understand the key insights and findings of the research. Also, it intends to deliver precise and statistical information for the audience.

The final chapter, Summary, Conclusion and Recommendations has summarized the key findings of the research, assess whether the study met its objectives, and suggest implications for future research and practice. This presents the researcher's point of view on the overall disaster management process with the help of data gathering and presentations. This also recommends the stakeholders about the ways in which the management process can be made more efficient and in victim's favor.

Chapter II

Literature Review

2.1. Conceptual Review

The concept of disaster and disaster management has multiple dimensions associated with it. Based on the factors associated with these terms, the conceptual review is organized into following sub-topics:

2.1.1. Disaster

The term disaster has been defined by various scholars in different basis. The meaning of disaster basically highlights different aspects, ranging from natural causes, societal vulnerabilities, and the limitations in community response.

Fritz (1961) defines disaster as an event concentrated in time and space, which produces damages to human beings and their environment, and which exceeds the ability of the affected community to cope using only its own resources. While White (1974) defines disaster as the result of the interaction between natural hazards and vulnerable human systems, leading to a failure of those systems to adjust or recover effectively. Disaster differs in the way it is caused and how it affected the society. Hence the definition of the scholars also varies in the same way. In essence, disaster itself is defined by two major things- a massive disruption on the society in terms of damage and it is beyond the capacity of the society to deal with. Anderson and Woodrow (1991) say highlights disaster as the intersection of two opposing forces: those of the physical environment and those of the social environment. Disaster occurs when vulnerable populations are exposed to hazards, they are unable to mitigate.

Quarantelli (2001) suggests that a disaster is not merely a natural or physical event, but a situation where a community's established social order is disrupted. He highlights that the effects of disasters are closely tied to how societies are organized, their preparedness, and their ability to respond. The impact of a disaster is shaped by the vulnerabilities and strengths of the society, making it a socially constructed event rather than just the result of the natural hazard itself. Quarantelli further outlined three phases of disaster:

The first phase, pre disaster phase includes the activities and measures taken before a disaster occurs. E.g. risk assessments, preparedness, and mitigation efforts to

reduce the potential impact of disasters. The second, disaster response phase includes quick response after the disaster, ensuring least possible harms. This may include emergency services and rescue services. Post disaster recovery process is the third phase, and it focuses on sustainable ways to reconstruct the damages and to normalize the situation in the society. This may include the empowerment of the society, participation of the people in the process, policy making by the government, communication and collaboration with the different stakeholders.

2.1.2. Disaster Management

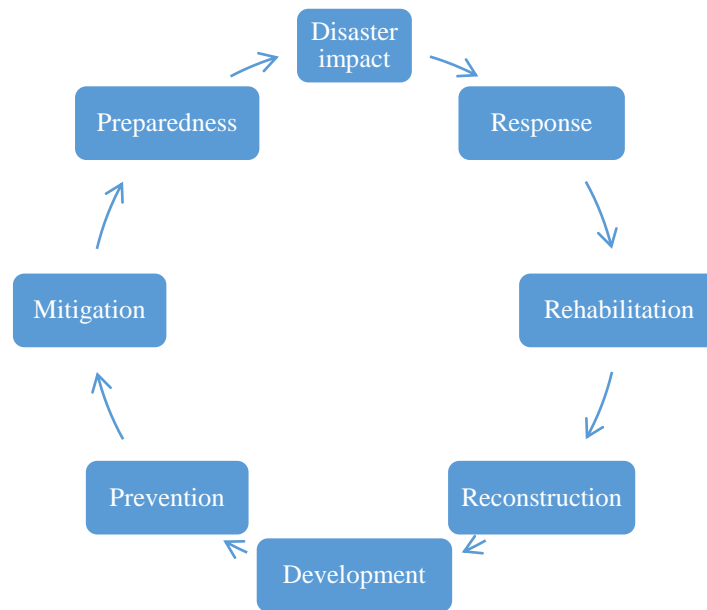
Disaster management or post-disaster management, by its terms denotes the practices made by the government or related agencies to recover from the disaster and its causes. Coppola and Damon (2011), states that disaster management involves a set of activities, programs, and measures taken to reduce the potential effects of disasters by prevention, preparedness, response, and recovery actions.

Here, post-disaster management possess two common ideas, i.e. help the disaster affected community to address current need; and prepare them to cope with future possible disaster risks Coppola (2011). The disaster management process encompasses the range of activities designed to prepare for, respond to, and recover from disaster and related events, with an emphasis on reducing vulnerability and building resilience (Kelman, 2018).

Disaster management consists of various steps in coordination of resources, efforts, and strategies among various stakeholders to prevent, mitigate, prepare for, respond to, and recover from disasters (Dickmann, 2012). In conclusion, disaster management is not a particular activity, rather it is a set of various activities that joins to help the disaster-hit community to recover from the damages they faced.

Disaster management process possess following five process cycle (Khan et al, 2008)

Figure 1 Five Cycle of Disaster Management Process



2.2. Theoretical Review

Disaster management process possess numerous theoretical references, as it has been a key area of study alongside the human development process. Disaster has no time bound and limitations, hence every generation have faced the disaster and prepared themselves to be prepared for the future possible incidents. Researchers have developed numerous disaster management theories and frameworks in academic field.

2.2.1. Vulnerability Theory

This theory conceptualizes disaster as a combined result of natural hazards and societal vulnerabilities (Wisner et al.1994). It further elaborates that vulnerable populations, often marginalized or living in unsafe environments, face increased risks during disasters because of their limited ability to respond, recover, or reduce exposure to hazards. The theory places emphasis on the structural inequalities that cause certain communities to suffer more from disasters than others. Post-disaster management practice majorly concerns with the vulnerability theory in terms of Nepal. Furthermore, in the case of Karnali and Sudurpaschim Province, the graph of inequality and vulnerability is measured high (KU School of Education, 2019), the unequal distribution of relief materials and re-construction funds has been reported in numbers.

2.2.2. Resilience Theory

This theory by Adger (2000), highlights the importance of communities' ability to recover and adapt after a disaster. He emphasized that resilience is crucial in

coping with environmental changes and disasters. Adger identified that communities with stronger social capital, diversity, and access to resources are more resilient because they can adapt and recover more effectively. The theory also highlights that resilience isn't just about bouncing back after a disturbance but involves adapting to change and potentially transforming systems to be more sustainable and less vulnerable to future shocks.

2.2.3. Complex Systems Theory

This theory suggests that disasters should be understood as complex, interconnected phenomena that affect social, ecological, and political systems (Pelling, 2011). Pelling highlights that disasters are not just natural events but arise from complex interactions within socio-economic and environmental systems. Effective disaster management requires adaptive strategies that evolve based on feedback and collaboration among diverse stakeholders, such as governments, NGOs, and communities, to build resilience and develop comprehensive solutions. Overall, this approach calls for a holistic perspective, recognizing the dynamic and interconnected nature of systems affected by disasters.

2.2.4. Human Factor Theory

This theory emphasizes the role of human behavior and decision-making in disaster preparedness and response, considering how cultural and social factors influence actions during crises. Understanding the human factors in disaster situations can greatly improve the effectiveness of response strategies (Reddick, 2010). The theory elaborates that effective communication and information dissemination are vital for guiding public actions during crises. Training and education aimed at enhancing individual and collective responses can lead to better outcomes in disaster situations. Also, understanding human factors helps to create more effective disaster management strategies that account for the complexities of human behavior in emergency contexts.

2.3. Frameworks for Disaster Management

Some of the widely accepted disaster management frameworks are organized here as follows:

2.3.1. Sendai Framework for Disaster Risk Reduction (2015-2030)

This framework by the United Nations promotes reducing disaster risks through preparation, community resilience, and long-term recovery plans. A key element is "building back better," which encourages countries to improve

infrastructure and living conditions after disasters. The four pillars of this framework are:

- Understanding disaster risk.
- Strengthening disaster risk governance.
- Investing in disaster risk reduction for resilience.
- Enhancing disaster preparedness for effective response.

Japan, after the massive disruption by 2011 Tohoku Earthquake and Tsunami, used this framework to successfully conduct the reconstruction process. Japan used it successfully by enhancing community preparedness and investing in infrastructure to mitigate future risks.

In Nepal, after the 2015 earthquake, recovery efforts were shaped by this framework, focusing on constructing safer buildings to prevent future damage. This framework can provide proper guidelines for post disaster management in the earthquake hit area in a sustainable way. Similarly, Mexico also used the Sendai framework after 2017 Puebla Earthquake emphasizing early warning systems, community preparedness, and risk assessment, especially in earthquake-prone areas.

2.3.2. Community Based Disaster Risk Management (CBDRM)

This Practice involves local community to be involved in the disaster management practice. The government's efforts may not be quite sufficient in some circumstances, hence public participation becomes necessary to successfully complete the management process.

The Melamchi flood in 2010 resulted from heavy rainfall and the sudden release of water from the Melamchi River. In response, organizations like the Nepal Red Cross Society and other NGOs began implementing CBDRM practices, emphasizing community engagement in disaster preparedness and risk reduction. Similarly in the post-disaster management practice of 2015 Gorkha Earthquake, Various organizations like Nepal Red Cross Society worked with the participation of local people in the community. The affected people were actively involved in creating action plans to prepare for future earthquakes, including retrofitting buildings and improving local infrastructure. Similarly, empowerment programs, skills development programs, rescue operations were practiced with the active participation of the community.

2.3.3. Post-disaster Management Framework in Earthquake 2015

The Gorkha-earthquake 2015 was a devastating one with 7.8 Richter scale, which caused more than 9000 deaths and 22000 injuries (MOHA, 2015). With the

continued aftershocks and parallel landslides, massive damage was caused making 498,852 private houses and 2,656 government buildings destroyed. The government of Nepal with coordination and communication with the various national and international institutions made the reconstruction process complete. Though, there are still some reconstructions left and the reconstruction efforts could take over a decade (UNDP, 2021), almost all the reconstructions have been made.

The government of Nepal used various frameworks to cope with the earthquake 2015.

Institutional Structure

Nepal Reconstruction Authority NRA was established to look after the overall recovery process. It got support from National Reconstruction Fund. It worked as a key implementor of government's policies and plans for the disaster management process.

Policy Development

Following the earthquake 2015, government developed The Reconstruction and rehabilitation policy 2016, to provide clear instructions in recovery process. The policy gives guidelines about government grants, relief funds, public procurement process and environmental assessment.

2.3.4. Post-disaster Recovery Framework (PDRF)

PDRF was established under the NRA's leadership and was intended to provide structured recovery approaches. The PDRF was responsible for maintaining coordination between Nepal government and different international agencies, working for the reconstruction process. It also associated financial management strategies and government's plans implementation. Beyond this, Government effectively used Sendai framework and CBDRM, which made the reconstruction process more effective and acknowledged by the people.

2.4. Policy Review

Nepal have developed several policies regarding the disaster management and its risk reduction. The earthquake 2015 highlighted the necessities of having quick, operational and accessible policies to quick response, recovery and reconstruction process.

2.4.1. National Reconstruction Authority (NRA)

Following the massive destruction by 2015 Gorkha earthquake, Nepal felt a huge lack of proper policy to cope with the big disasters. The National Reconstruction Authority NRA was established in December 2015 to act as a national authority of

reconstruction after the earthquake. The NRA would function under the Reconstruction and rehabilitation policy, 2016. The authority was responsible for the reconstruction of the damaged buildings, retrofitting, collaboration with the national and international organizations to ensure the timely reestablishment in disaster management process (Rai, 2019). The NRA was assigned for following objectives (Rai, 2019):

- i. Reconstruct or retrofit the damaged houses.
- ii. Manage the equitable grant and relief distribution.
- iii. Environmental Impact Assessment.
- iv. Make regulations regarding the reconstruction process if needed.
- v. Facilitate the Land registration process.
- vi. Collaborate with the national and international non-governmental organizations.

Nepal Reconstruction Authority was dissolved in December 2021 after its time-period was over. The Reconstruction work was then handed to National Disaster Risk Reduction and Management Authority by the government decisions (DC Nepal, 2021).

2.4.2. Disaster Risk Reduction and Management Act, 2017

Nepal made a national act to have a proper management of post-earthquake and reduce the risk of future possible disasters. The act addresses the establishment of a national and central authority, which would act as a center to mobilize the national resources in the affected area. National Disaster Risk Reduction and Management Authority NDRRMA was established in December 2019 to act as central unit of government, to mobilize the resources and implement the national policy in the disaster hit area to ensure the timely response and recovery. The later disaster management was handled by this authority. NDRRMA got following mandate to work on the disaster management sector (NDRRMA, 2019):

- i. Would act as a central unit of disaster management and risk reduction.
- ii. To facilitate the provincial and local level government to form periodic plans to cope with the disaster with financial and technical support.
- iii. To identify the possible cause of various disasters like flood, landslides, earthquake, climate change etc. with academic research and study.
- iv. Engage the non-governmental, industrial, private sector and public to engage in the reconstruction process with coordination and cooperation.

- v. Ensure the quick response and recovery in the disaster hit areas.
- vi. Capacity building and empowerment of the rescue groups in the federal, provincial and local level to ensure effective response recovery and relief packages.
- vii. To organize and manage the financial and other relief materials, received from the national and international institutions to evenly distribute among the affected people.
- viii. To develop the pre-alert system and easy communication mechanism to help in disaster risk reduction process.

2.4.3. Jajarkot Earthquake 2023 Management by NDRRMA

NDRRMA is taking the responsibility of reconstruction and disaster management in the Jajarkot earthquake 2023, post disaster management process. This includes financial as well as construction aspects. The last update 18 August 2024 shows that a total of 71,378 temporary shelters has been established, and Nrs. 3.16 billion has been distributed to 11,997 total beneficiaries (NDRRMA, 2024).

Due to the delay in development of unified course of action by the government side, the actual reconstruction process has not been started in Jajarkot yet (Annapurna Times, 2024). The NDRRMA claims that it has already developed the course of action, but it is taking time to get approval by the government (Annapurna Times, 2024).

2.5. Empirical Review

The disaster management and its different dynamics has been studied by numerous scholars during the destructive disasters around the world. Hettige (2022) points out that disasters are not just natural events but are shaped by human factors like inequality and poor planning. He points out that areas with weak buildings and poor infrastructure suffer more damage, even during smaller disasters. Pelling (2011) explains that disasters are not just caused by natural events but by how governments and economies work. He takes a reference of how poorly managed cities often face worse outcomes because of weak planning and unpreparedness. Pelling's views can be taken under consideration regarding Nepal's recent disaster- flood and landslide around the nation, especially its huge damage in Kathmandu valley. Similarly, White (1974) explained that disasters are the result of natural hazards interacting with human vulnerabilities. He also exemplifies urban areas with poor drainage systems often suffering more during floods, highlighting the need for better city planning.

Pandey (2021) studied Nepal's 2015 Gorkha earthquake and found that while the government created the National Reconstruction Authority (NRA) to speed up rebuilding, some groups, like women and low-income families were left behind. The study suggests that disaster recovery must include all parts of society. Studying about the Nepal Reconstruction Authority's work after the 2015 earthquake, Rai (2019) says, NRA used government funds and worked with international groups to rebuild damaged areas, but delays and mismanagement reduced its effectiveness. The study suggests that better planning is needed in such cases.

Tierney et al. (2001) found that both governments and communities must work together in disaster recovery. They highlighted the scenario after the 2011 Christchurch earthquake in New Zealand. It is found that, a strong coordination is required to rebuild homes and infrastructure quickly. In terms of disaster management, Coppola (2011) describes disaster management as a cycle of preparation, response, and recovery. Every aspect in the cycle should function equally to complete the process. He highlighted the Philippines disaster management system where early warning systems for typhoons have reduced deaths significantly, showing the value of preparation.

Khan (2007) argues that managing the 2004 Indian Ocean tsunami showed problems in handling the long-term effects of disasters. Though physical reconstruction efforts were very quick due to international aids and supports, mental health issues among survivors were mostly ignored. This lack of attention created lasting trauma, showing the importance of combining psychological care with material recovery. After studying the disaster management practices in 2010 Haiti earthquake, Cazottes et al. (2012) explain that earthquake exposed weaknesses of government in coordinating international assistance. Different agencies often worked without communication, slowing down recovery efforts. This case shows how having a single and organized authority can make disaster management more effective. Dickmann (2012) highlights the importance of coordination among different groups during disaster recovery. For example, after the 2004 tsunami, countries that worked closely with local governments and communities recovered faster than those relying only on external aid. Aung and Win (2010) found that the response to Cyclone Nargis in 2008 in Myanmar was delayed because of restrictions on international aid. This delay caused more harm to affected communities, showing the importance of open communication and trust between governments and relief agencies.

Relating disaster issues with vulnerability, Anderson and Woodrow (1991) argue that disasters happen when vulnerable populations are exposed to hazards because they cannot handle it. Wisner et al. (1994) found that disasters often hit the poorest people hardest because they have fewer resources to recover. After the 2004 tsunami, wealthier communities rebuilt faster while poorer areas struggled for years to recover.

Smith et al. (2009) argues that disaster plans need to focus on helping vulnerable groups. Studying about the disaster management practices of Hurricane Katrina in 2005, they argued that earthquake affected people differently based on their income levels. Poorer communities faced worse outcomes because they lived in vulnerable areas and had fewer resources to recover. On the similar note, Kelman (2018) argues that the impact of disasters depends on how vulnerable a society is. For example, areas with strong social and economic systems recover faster, while poorer areas face more difficulties. This idea highlights the need to strengthen communities before disasters strike. Lee (2016) observed that Japan's recovery after the 2011 Tohoku earthquake was effective because of the use of Sendai Framework for Disaster Risk Reduction. The "build back better" approach improved damaged infrastructure and prepared the country for future disasters.

Disaster management depends directly or indirectly with the people's awareness about the process. Reddick (2010) found that people's actions during disasters often depend on how much information they have. During Hurricane Katrina, many residents did not evacuate because they did not fully understand the risks which increased the death count. This shows the importance of clear communication in disaster planning. The disaster management practices require active participation of people. Samuels et al. (2015) examined floods in Bangladesh and found that involving local people in disaster recovery worked well. When communities took part in rebuilding efforts, they were more satisfied and better prepared for future floods. Adger (2000) states that resilience, or the ability to bounce back, is key to disaster recovery. Communities with good social connections and resources recover more quickly and are better prepared for future disasters. This shows why strengthening local communities is important.

The Process of disaster management engages government as well as non-governmental and private sector together with the involvement of communities. Tierney et al. (2001) emphasize that both governments and communities must work

together in disaster recovery. Talking about the 2011 Christchurch earthquake in New Zealand, they reached to that conclusion. The disaster showed that, strong coordination helped rebuild homes and infrastructure quickly. Coppola (2011) describes disaster management as a cycle of preparation, response, and recovery. For example, in the Philippines, early warning systems for typhoons have reduced deaths significantly, showing the value of preparation.

2.6. Research Gap

There is absence of accurate and actual data about the earthquake damages are not well available for reference. Though, the responsible government sites such as Home Ministry, Ministry of health and population and NDRRMA has preliminary data collected from the ground, while the statistics do not resemble with each other. Different social organizations like Nepal Red-Cross Society have collected the disaster data from the field as well, but there is no organized and in-depth data available.

Even if the ground condition and of the damages and efforts made by the government as well as non-governmental organizations are documented in some ways from the side of concerned authorities. One can study and have reference of the incident from service provider's perspective only. The actual need analysis from the demand side (victim's side) has not been clearly documented. Articles are also prepared from the victim's side, but no reliable source has been mentioned. These scenario of Jajarkot earthquake dragged me to study about the real scenario of the victims. In such cases of disaster, balanced insights are needed to have proper need assessment and post-disaster management practices. Pelling (2011) in his Complex System Theory mentions that only top-down approach is not sufficient to measure the actual scenario of the disaster and to cope with it, meanwhile the insights and efforts from both demand and supply side is equally important.

Hence this study is intended to fill the research gap and provide accurate and balanced insight of both demand and supply side. The final study is believed to be a key literature to study post-disaster management practices, frameworks, actual need of the victims and the amount of delivery provided by government and non-government sides and ultimately the level of satisfaction of the victims to government service and delivery.

2.7. Conceptual Framework of the Study

The disaster management process is a dynamic process where both governmental systems and the affected populations play critical roles. The

government provides resources and frameworks, while communities contribute local knowledge and capacity, ensuring a more resilient response (Tierney et al., 2001). Hence Both demand side and supply side are required to make the process well-functioning.

Figure 2 Conceptual Framework

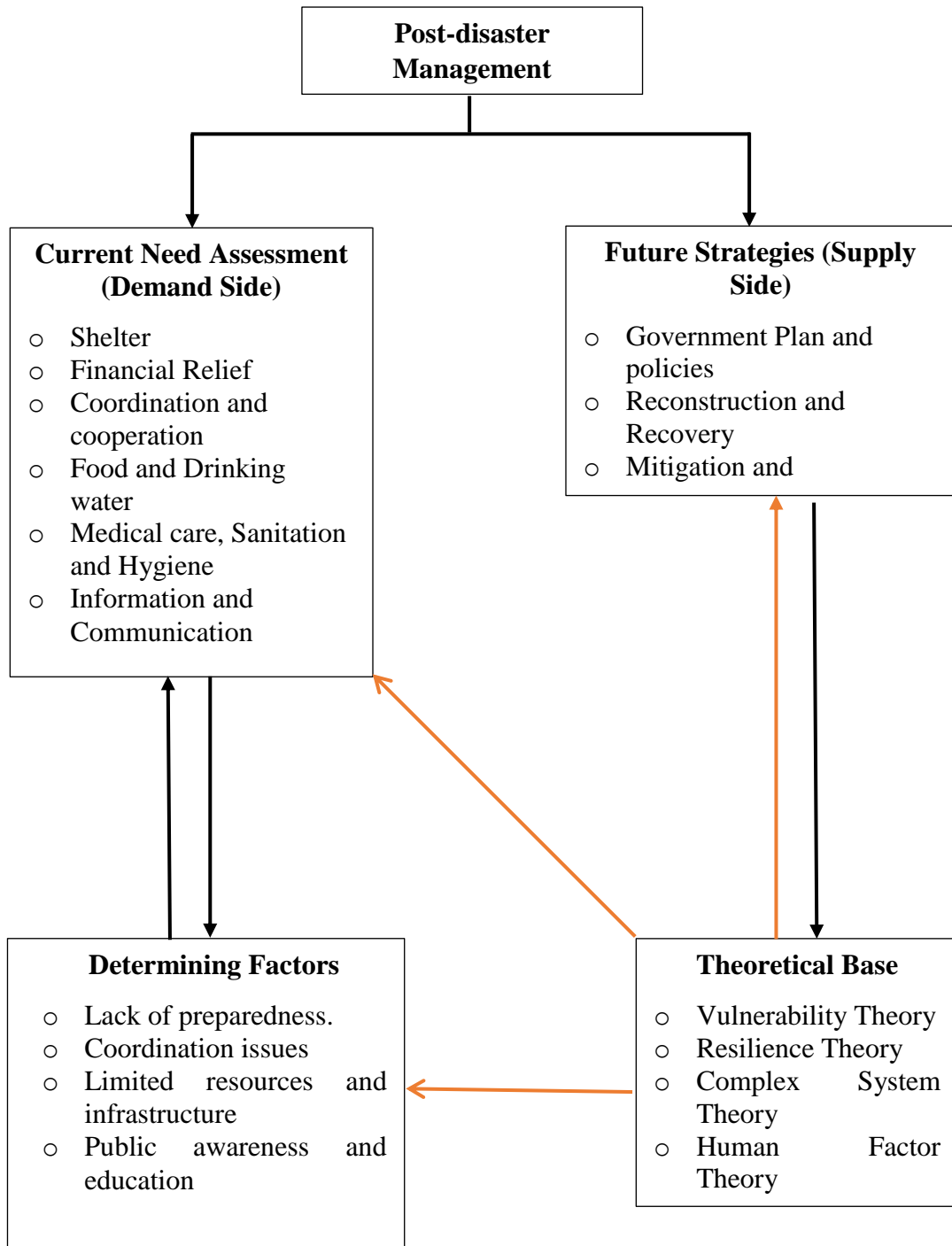


Figure 2 explains that disaster management two major wings i.e. current need assessment and future strategies. The current need of the earthquake victims should be a key priority to initiate immediate disaster management activities. The needs may include shelter, financial relief programs, food and drinking water supplies to the affected community, medical kits and equipment etc. The awareness and alert systems are also major needs of the victims to cope with the disaster damages initially.

While in longer term, the supply side must think about multiple dynamics. The disaster management requires effective plans and policies from the government sector. Permanent reconstruction of infrastructures becomes another important step for disaster management. The measures of preparedness should be developed to ensure that future possible disasters may harm less, as compared to the present. To strengthen the capacity of the communities to cope with disasters, sustainable strategies should be made. Both wings are supported by the major four theories of disaster management. Vulnerability theory, Resilience theory, Complex System theory and Human Factor theory provides valuable insights in terms of both current and future steps of disaster management.

Meanwhile the process-efficiency gets determined by various factors like government's preparedness, coordination with the three tiers of government, with the donor agencies and private sectors. Limited resources come out as another challenge of disaster management. Likewise, the amount of awareness and literacy rate in the public also hampers the efficiency of disaster management programs in both short- and long-term interventions.

Chapter III

Research Methodology

3.1. Research Design

This study employed a mixed (qualitative and quantitative) approach to gain a comprehensive understanding of the research topic. To explore the perspectives of stakeholders involved in disaster management, the qualitative approach was focus on the supply side-government support systems and services provided to victims.

To assess the demand side-victims' needs and their satisfaction with government services, a quantitative approach was used. The mixed-methods approach allowed for a nuanced understanding of the gap between the demand and supply sides of disaster management. Mixed methods allowed for triangulation, where findings from qualitative method were cross validated by the quantitative, enhancing the reliability and credibility of the results.

3.2. Rationale for the Selection of the Study Area

Barekot Rural Municipality-Jajarkot, was chosen as a study area in this study because it was the epicenter of destructive earthquake 2023. Barekot 1 Ramidada, experienced widespread destruction of infrastructure, including homes, schools, and healthcare facilities, resulting in a significant impact on the livelihoods and safety of its inhabitants. Despite the major destruction, there was not reliable source of information about the detailed damages, recovery works, condition of people and status reconstruction progress at the present. A significant of 109 deaths were reported in Jajarkot among 157 deaths, caused by the earthquake. Though the disaster affected other four districts i.e. Rukum-west, Salyan, Bajhang and bajura as well, massive harm was caused in the Barekot rural municipality, being the epicenter. These statistics guided the researcher to make a disaster management study in that particular area, hit by the earthquake. With a strong belief that this research explores the government's disaster response, the effectiveness of local disaster risk reduction strategies, and the community's resilience in the aftermath of the earthquake, the study area was selected.

3.3. Nature and Sources of Data

In this research, both qualitative and quantitative data has been used. For the completion of the study, primary data has been directly collected through field visit. The primary data has been collected by directly interacting with the affected people as

well as the representatives of service providers. The data about present situation of disaster management is collected firsthand by physically interacting with the victims.

As the incident happened a year ago, secondary data sources were needed to have a comprehensive insight about the damages caused. Also, in the first year period, few steps of disaster management cycle have been already completed such as rescue, response and partial recovery. The necessary secondary data has been collected from different sources like Central Bureau of Statistics CBS, NDRRMA, Home Ministry of Nepal, Non-governmental organization's reports, Published newspapers like The Annapurna Post, Kantipur National Daily, Karobar Daily.

3.4. Universe, Sample and Sampling Procedures

According to the Spokeperson of Barekot RM during field visit, Jajarkot earthauqke, 2023 has destroyed 5586 households which is the universe of this study. The following table shows the universe size of Barekot RM:

Table3.1.: Universe and Sample Size

Ward no.	Affected Houses	Partially Damaged Houses	Totally Damaged Houses
Barekot-1	650	515	135
Barekot-2	545	420	225
Barekot-3	422	402	20
Barekot-4	753	519	234
Barekot-5	727	622	105
Barekot-6	432	407	25
Barekot-7	691	587	104
Barekot-8	874	615	259
Barekot-9	492	402	90
Total (Universe)	5586	4389	1197

Source: Field visit, 2024

Among the 5586 affected households, 234 affected households were studied as a sample, which is about 5 Percent of the universe. To collect the 234 sample households' information, purposively, three wards, i.e. ward no. 1, 2 and 3 among the 9 wards of Barekot RM to make clusters, The ward no. 1 was chosen for the study because the epicenter Ramidanda lies in this ward. Ward number 1, of Barekot has total of 650 households affected, among which 515 house were completely destructed.

While because of the presence of office of the rural municipality, in ward no. 2, it was chosen as another ward to conduct the study. Considering the presence of municipal office and its possible influences in the relief distribution process around the victims living around, it was chosen as a study area. There are 545 number of affected households in total, where 385 households were partially damaged.

The ward no. 3 is selected as the sample because, it is the most rural one in terms of infrastructure development. i.e. there is lack of roads connectivity and other infrastructures. The less infrastructural development might cause the difficulties in relief distribution and construction works. Total of 422 households were affected by the earthquake in ward no. 3, among which 402 houses were completely destroyed and 20 were partially destroyed.

After selecting three wards by purposive sampling, the random sampling technique was used to select the households inside the selected wards. The sample included different age groups, genders, ethnicity, religions and socio-economic status to ensure diverse representation of the affected population. This provided a comprehensive understanding of the experiences and needs of the community following the earthquake.

3.5. Techniques and Tools of Data Collection

The study used two techniques for data collection. Household survey has been used to collect quantitative data and Key Informants Interview has been used to collect qualitative insights regarding the post-disaster management process.

3.5.1. Household Survey

Household survey has been conducted in 234 households by developing structured questionnaire as tool. The questionnaire covered about the demographic information of the households, socio-economic information, damages caused in the affected area, current status of the reconstruction process, perceived efficiency and satisfaction of the people on various stages disaster management. The format of household questionnaire has been attached in Appendix B.

3.5.2. Key Informant Interview (KII)

To generate the qualitative insights from the supply side, Key Information Interview was conducted with the selected number of respondents. Five respondents of the KII were key representatives of the concerned authorities. The five respondents included a representative from federal government agencies i.e. an information officer of NDRRMA and a federal parliament member representing Jajarkot district. From

the local government, chairperson of Barekot Rural Municipality was selected as respondent, District coordinator of Redcross Jajarkot was interviewed for KII. From a private sector, a local businessman who had worked for the disaster management in Barekot, and a central committee member of political party CPN Maoist, was chosen. KII guidelines was developed for the inquiry, and it majorly concerned about the initiatives taken by their side for response, recovery and reconstruction. It also inquired about current status of the reconstruction, major challenges faced, and time estimated to complete the reconstruction process. The KII guideline is attached in Appendix C.

3.6. Reliability and Validity

Reliability shows the consistency of the measurement in research study. If a test or method produces the same results when repeated under the same conditions, it is considered reliable. To ensure that, the consistent data has been measured in the study, reliable tool i.e. household survey with structured questionnaire has been used (Cohen et al., 2018). The consistency of data has been measured by assessing Cronbach's alpha, which is a measure to calculate the coefficient of inter-item correlations to determine the consistency among them (Cohen et al., 2018). The Cronbah's alpha value has come out as 0.61, which can be considered as an acceptable level of reliability. Following table shows the reliability measures of this study:

Table 3.2.: Reliability Measure

Case Processing Summary		
	N	%
Valid	234	100.0
Excluded	0	.0
Total	234	100.0
Reliability Status		
Cronbach's Alpha	No. of Items	
0.61	49	

Source: Field Survey, 2024

Likewise, validity measures how well a method captures what it is supposed to measure. It measures the accuracy of the methods. Content, construct and criterion validity is supposed to be ensured for the overall validity of any research study Cohen et al. (2018). This study has introduced content validity to select representative

sample while Construct validity has been used to triangulate field data with the literature review. It has been proven that it ensures both content and construct validity. The table below shows the content validity status of the household survey whereas the construct validity table has been attached in the appendix D.

Table 3.3.: Content Validity Measure

	Efficiency Index	Satisfaction Index
Pearson Correlation	1	0.15*
Sig. (2-tailed)	0	0.02
N	234	234

Source: Field Survey, 2024

3.7. Methods of Data Analysis

The study used SPSS 20 version software for data analysis. The data analysis using SPSS software has included Descriptive Analysis and inferential analysis to describe the main features of the data. Cross-tabulation was used to examine interactions between different categorical variables. Additionally, frequency distribution was also measured for the prevalence of specific responses or characteristics within the sample. Data has been organized, managed, and interpreted using SPSS software and Microsoft Excel. Various pictorial and graphical representations has been designed to make the findings easily understandable. Graphical representations used are Pie chart, Bar diagrams, columns, line graphs etc. depending on the nature of the variables.

3.8. Ethical Consideration

The research study was conducted purely for the partial fulfillment of the requirements for the degree of Master of Arts in Rural Development. The study starts with the department's approval and selection of the research supervisor. The data collection was initiated according with the department's recommendation letter, which is attached in the appendix A. As the study was conducted in Barekot Rural Municipality, the researcher has taken permission from the rural municipality and three of the wards i.e. ward no. 1,2&3 to collect the primary data from households.

The households were well informed that their responses were going to be utilized for academic purposes only. The respondent's permission was considered as a key before starting the data collection. The researcher has kept the responses confidential according to the data protection regulations of 2018.

Chapter IV

Presentation and Interpretation of Field Data

All The data collected from the field were edited, classified and organized to develop in the form of presentation. The organized data has been presented in many forms like table, charts, figures and diagrams. This chapter has been organized into four sections:

4.1. Household Information of the Earthquake Victims

Household Information provides basic understandings about the characteristics and nature of the population. To analyse the earthquake damages and its reconstruction process, study of the households becomes a must. The nature of people living in the affected areas shape how the earthquake and its impacts are perceived and manages. The demographic and socio-economic study provides an insight into the community strength and weakness, which creates an impact on the disaster management process.

4.1.1. Age Structure

The person, providing information about the household should be mature. For this purpose, age factor was introduced in the survey part. Here is the age group of the respondents, in table form.

Table 4.1.: Age of the Respondents

Age Group (Years)	Frequency	Percent
1-18	3	1.3
19-59	211	90.2
60+	20	8.5
Total	234	100

Source: Field Survey, 2024

Table 4.1 shows that among the three-age group, 90.2 percent of the respondents belong to age group 19 to 59 years. 8.5 percent of the respondents were from the age group 60 plus, whereas 1.3 percent of the respondents came out to be below 18 years.

4.1.2. Sex Structure

The sex structure was studied to know the composition of sex group and male female ratio of the respondents. The table below shows the sex structure reported:

Table 4.2.: Sex of the Respondents

	Frequency	Percent
Female	94	40.2
Male	140	59.8
Total	234	100.0

Source: Field Survey, 2024

Table 4.2 shows that 59.8 percent of the respondents were male, whereas others were female. The M/F ratio becomes 1.49:1, which means that there are approximately 1.49 male respondents for 1 female respondent.

4.1.3. Caste/Ethnicity Structure

The caste/ethnicity provides the diversity of any area. Diversified society might affect the social bonding and capacity. To assess the nature of the society, ethnic structure was measured. The table below shows ethnic composition of Barekot Rural Municipality:

Table 4.3.: Caste/Ethnicity of the Respondents

	Frequency	Percent
Chhetri	101	43.2
Dalit	64	27.4
Janajati	69	29.5
Total	234	100.0

Source: Field Survey, 2024

Table 4.3. shows that only three ethnic community are recorded in the household survey i.e. Chhetri, Dalit and Janajati. Among them, Chhetri are the largest group with 43.2 percent of population, which is followed by Janajati 29.5 percent and Dalit only 27.4 percent.

4.1.4. Religious Structure

The religious structure of the surveyed households is presented in the table below:

Table 4.4.: Religion of the Respondents

	Frequency	Percent
Hindu	229	97.9
Christian	5	2.1
Total	234	100.0

Source: Field Survey, 2024

Table 4.4 shows that people in Barekot follows only two religions. 97.9 Percent of the respondents were recorded Hindu, while only 2.1 percent follow

Christianism. Almost everyone in the study came out as Hindu and a small Christian group appeared. There is completely absence of other religions.

4.1.5. Educational Status

Educational status was measured because the level of community awareness plays grate role in disaster management. The status plays a key role in community development and Human Development Index HDI. The efficiency of disaster management process could be shaped by the literacy rate of the people. The education status of the Barekot RM is presented in the table below:

Table 4.5.: Educational Status of the Respondents

	Frequency	Percent
Illiterate	90	38.5
Primary	101	43.2
Secondary	29	12.4
Higher Education	14	3.4
Total	234	100.0

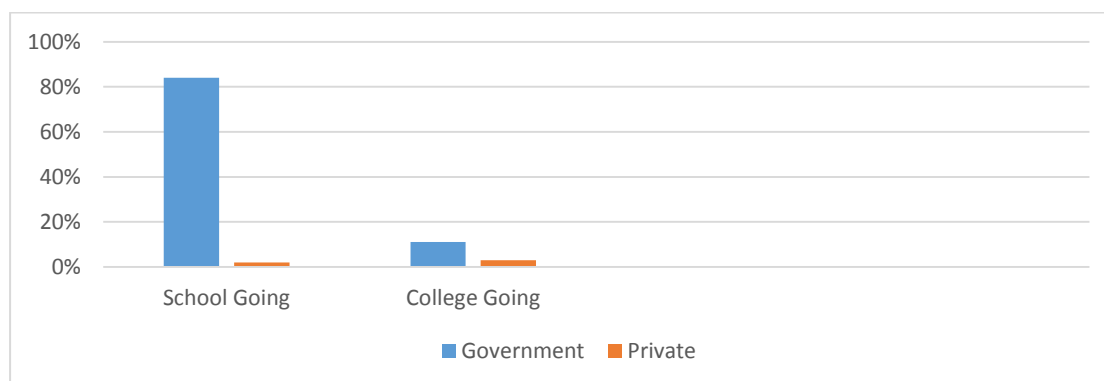
Source: Field Survey, 2024

Table 4.5 looks at the education status and shows that 43.2 percent of the respondents have completed the primary level, meanwhile 38.5 percent came out illiterate. In the same way, 12.4 percent have completed the secondary level and very less amount, 3.4 percent only have completed their secondary level of study. Being an extremely rural municipality, people had very less to formal education in Barekot.

4.1.6. Schooling of the Children

Children’s schooling shows access to education to the children of this generation. This provides insights about the progress of Human Development. The status of children’s schooling is shown on the figure below.

Figure 2: Children’s Schooling in Barekot



Source: Field Survey, 2024

Figure 2 demonstrates the school going children's status. The bar-chart shows that among the total number of students in Barekot, 84 percent children go to government schools, which is followed by the government college which is about 11 percent of the total students. There is seen a smaller number of children that go to private academic institutions. Only 3 percent of them have joined the private colleges as 2 percent of them attend private school.

4.1.7. Trainings Completed

Trainings and skills development are important aspects of economic development. This guides the increment in income opportunities and community resilience. Community resilience further helps to recover from the disasters like earthquake. Here is the table showing trainings completed by the people in Barekot.

Table 4.6.: Trainings Completed by the Respondents

	Frequency	Percent
Goat farming	3	1.3
Saving and credit	5	2.1
Total	234	100.0

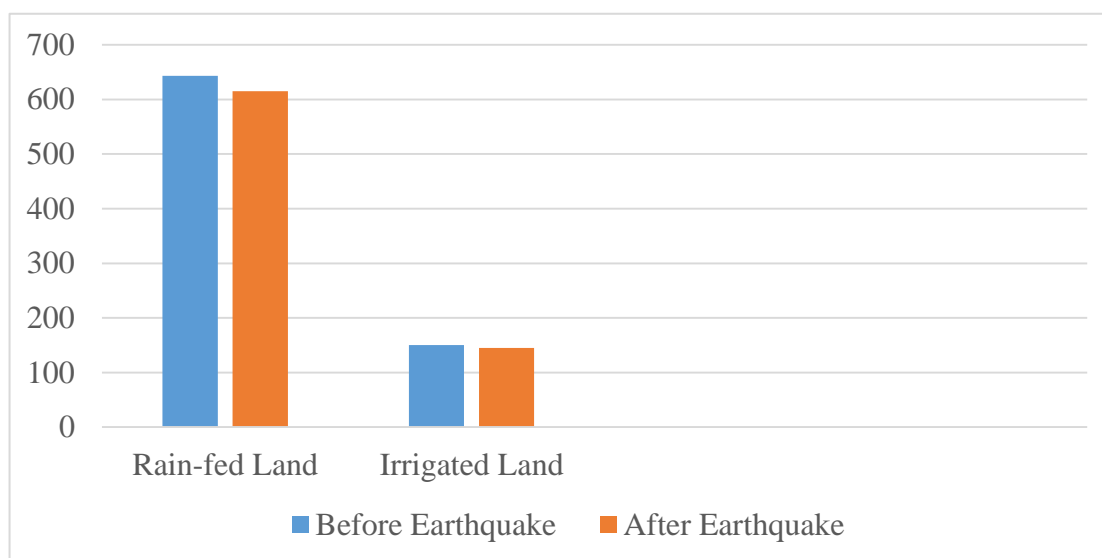
Source: Field Survey, 2024

Table 4.6 shows that in the training part, very few people have participated in the trainings and capacity building activities. Among 234 respondents, 2.1 percent people have taken saving and credit training. Similarly, only 1.3 percent people have participated in goat farming training. Similarly, there is also absence of skills development trainings or empowerment activities provided to the people. The very less amount of people completing the training highlights that the income generation options of Barekot RM are very limited.

4.1.8. Land Holding Status

Barekot rural municipality depends mostly on agriculture, which makes it important to study the land holding status. Land holding becomes important element in economic development as it leads to agricultural productivity and food sufficiency. The figure below shows land holding status of people in Barekot.

Figure 3: Land Holdings in Ropani



Source: Household Survey 2024

Figure 3 shows that earthquake has caused slight damage in land in Berekot. Firstly, the data shows that most of the land holding is rain fed which is about 643 ropani, while 150 ropani is irrigated. The earthquake damaged 28 ropani of rain fed land as it comes to 615 ropani after the earthquake. Meanwhile the irrigated land is reduced to 145 ropani after earthquake.

4.1.9. Food Sufficiency Status

The food sufficiency status is dependent on the land holding status. Food sufficiency shows the poverty scale of any population, and it is considered as a primary element of human development. The food sufficiency is shown on figures below.

Table 4.7.: Food Sufficiency Status of the Households

Duration	Frequency	Percent
<3 Months	100	42.7
3-6 Months	106	45.3
6-9 Months	26	11.1
9-12 Months	2	0.9
Total	234	100.0

Source: Field Survey, 2024

In the table 4.7, most households have the food sufficiency less than 6 months. Among them 45.3 percent produces food, which is sufficient for only 3 to 6 months. Another huge portion of 42.7 percent are forced to buy food from the market

after 3 months. The data is followed by 11.1 percent to have sufficient food for 6 to 9 months and just 0.9 percent have sufficient food for a year.

The data highlights huge food insecurity problem in the Barekot municipality. In this poor situation of food sufficiency, land degradation due to earthquake has hugely harmed the people. This could cause the increment in food insecurity in the future. The dominance of households with food sufficiency less than 6 month indicates that there is either less amount of land to cultivate or the productivity is low.

4.1.10. Sources of Income

The household survey included income source of the households to analyse how economic activities are running in Barekot. Livelihood sources are a crucial aspect in disaster management process, also in sustainable development. It shows that how well the households can recover from the disaster and maintain their standard of living. The following table shows how families in Barekot depend on, for their living.

Table 4.8.: Sources of Income in Barekot (Annual)

Topic	No of Households	Percent
Local Shop	8	3
Crop Product	230	98
Government Job	22	9.4
Private Job	6	2.5
Daily Wages	105	44.8
Remittance	87	37.2

Source: Field Survey, 2024

Table 4.8 shows that agriculture product is the major source of income in Barekot, almost every household (98 percent) depend upon it. Daily wages and remittance come out as another stronger aspects as a means of livelihood. 44.8 percent households depend on daily wage-based income, which is followed by remittance, in which 37.2 percent family depend. Besides that, 9.4 percent family income is generated by government job, which is followed by local shop and private job with 3 percent and 2.5 percent respectively. This denotes that economy of Barekot is majorly agrarian, with less support from non-agriculture sectors.

The high dependency on agriculture suggests that there are less opportunities of income for the people. With very less literacy rate and trainings completed in Barekot, mentioned in table 4.5. it is understandable that the large number of populations depend on agriculture for living. Significant dependency on daily wage and remittance indicates the lack of permanent source of income and limited access to employment.

4.1.11. Expenses Habit of the Households

The expenses behaviour of households is measured to see how the family spend money in Barekot. This gives insights to how the households allocate money and what are their priorities. This also highlights the way, how the disaster-affected households manage their limited income addressing their basic needs together with socio-cultural needs. The table below shows post-earthquake expense habit of the households in Barekot.

Table 4.9. Expenses habit of Households in Barekot (Annual)

Topic	N	Minimum	Maximum	Mean
Daily consumption	234 (100%)	8000	900000	91602.56
Clothing	233 (99.5%)	3000	450000	33952.79
Cultural celebration	231 (98.7%)	2000	250000	23636.36
Child education	219 (93.5%)	0	400000	30216.89
Medicine	207 (88.4%)	0	130000	7985.51
Accessories/gold	8 (3.4%)	0	30000	15125.00
Visit/pilgrimage	0	0	0	0

Source: Field Survey, 2024

Table 4.9 shows that 100 percent of households spend on daily consumption, with an average expenditure of Rs. 91,602.56, ranging from Rs. 8,000 to Rs. 900,000. 99.5 percent households spend on clothing as almost Rs. 34,000 goes into it annually. Cultural celebrations, reported by 98.7 percent of households, is responsible for about Rs. 24,000, while 93.5 percent of households, spend on child education, which is remarkable. An average of Rs. 30,000 gets spent on this topic. Medical expenses, reported by 88.4 percent of households, have a mean of Rs. 8,000, ranging up to Rs.130,000. The luxury spendings seem less as only 3.4 percent spend on accessories with an average of Rs 15,000 spending and no household reported spending on visits or pilgrimages, resulting in zero recorded expenditure for this category.

As all the household spend their income in daily consumption, it indicates that the family's priority is to fulfil the basic needs like food and others basic things.

Maintaining social norms and cultural values seemed important for the households looking at their spendings in clothing and cultural celebrations even under the financial burdens. The child education sector is also prioritized as people are now aware about the value of education. There seems less access to public health services as less spending on this topic. Luxury spendings like accessories and visit/pilgrimages suggest that people focus more on survival rather than non-essential activities.

4.2. Current Status of the Reconstruction Process

This subheading measures the amount of work-done in disaster management process in Jajarkot. It has been organized as follows:

4.2.1. Damages Caused by Earthquake

Detailed statistics about earthquake damages provides guidelines for generating disaster management policies. Looking at the damage it can be calculated that how devastating was the earthquake and what kinds of interventions need to be applied for disaster management. The table below shows damages caused by earthquake in Barekot.

Table 4.10.: Damages Caused in Barekot

Topic	No. of Households	Total Households	Percent
House Completely Destructed	199	234	85.04
House Partially Destructed	36	234	15.38
Livestock	3	234	1.28
Food	5	234	2.14
Commodity	0	234	0.00
Liquid (Money)	1	234	0.43

Source: Field Survey, 2024

Table 4.10 shows that 85.04 percent of households experienced complete destruction of their homes, another 15.38 percent reported partial damage to their homes. In terms of other damages, only 2.14 percent experienced the damages of stored food items, followed by 3 households experienced damages in livestock, and only 1 household lost their money in earthquake. No household experienced the loss of commodity like gold, silver and others.

The housing sector seems to be most devastated with majority of households lost their housing that earthquake. There seems to be slight damages in the non-housing sector such as commodity, livestock, food etc. as well.

4.2.2. Latest Reconstruction Update in Barekot

A year has already passed since the devastating earthquake, but there is very little works undergone as we see in overall reconstruction process. A study was conducted to measure the effectiveness of the post- disaster recovery process. As, the reconstruction plays an important role in restoring communities' life to normalcy, it is important to understand the number of services provided in that sector. This also highlights the volume of difficulties the households are facing to recover from the shocks. Tables below shows the detailed information about the reconstruction works and its impact on lives of the people:

Table 4.11.: Reconstruction Update in Barekot

Reconstruction topic	Frequency	Percent
Received the first instalment NRs. 25,000 for temporary shelter	231	98.7
Received the second instalment NRs. 25,000 for temporary shelter	58	24.8
Started the reconstruction process	155	66.2
Completed the temporary shelter	225	96.2
Get relief amount from the government for permanent shelter	0	0
Started the construction of permanent shelter	36	15.4
Completely dependent on govt./social organizations for reconstruction	214	91.5
Received permanent reconstruction updated from government	15	6.4
Received counselling and mental health services to cope with trauma	58	24.8
Restored access to basic services like electricity, water and healthcare?	189	80.8
Debris and waste materials cleared from the affected areas	205	87.6
Public facilities (Parks, markets etc.) has been restored	1	0.4

Source: Field Survey, 2024

Table 4.11 shows almost all the households i.e. 98.7 percent have already received the first instalment of Rs. 25,000 for temporary shelters. While only 24.8 percent have received the second instalment. Despite not receiving the second installment, total of 96.2 percent completed the construction of their temporary shelters up to now and 66.2 percent have at least started the reconstruction process. Only 15.4 percent households have started constructing the permanent shelter on their own, because none of the households have received amount for that purpose. A significant 91.5 percent says they would completely depend either on government or any other social organizations for the process, the remaining will start on their own if

the government delays the process. Only 6.4 percent have little reconstruction update from the government and other seem completely unaware about that. Regarding access to basic services, 80.8 percent restored electricity, water, and healthcare, and 87.6 percent have reported debris clearance. Only 24.8 percent have received mental health counselling and trauma support provided by either government or NGOs. However, the restoration of public facilities such as parks and markets seem very less, with only 0.4 percent indicating the recovery.

The data highlights a mixed scenario of the reconstruction process. In the case of temporary shelters and basic service restoration, there seems significant progress. But the permanent reconstruction process looks slow. The government has not prepared a Course of Action to start the permanent reconstruction. Majority of the households have been still waiting for government support to construct the permanent house. As government side claims that amount of temporary shelter has been already released, but the data shows that the victims has not received the fund. The heavy reliance on government and social organizations for reconstruction suggests that there is a huge lack of social capacity and resources.

4.2.3. Reconstruction Update on Housing in Barekot

As the most damages was caused in housing, the construction update of permanent and temporary housing was measured. The status of housing construction provides valuable insights on how efficient; the disaster management is going on. The recovery stage of the process starts with the construction of infrastructure including houses. The following table shows recent update on housing construction in Barekot.

Table: 4.12.: Reconstruction Update on Housing in Barekot

	Frequency (N)	Percent
Status of reconstruction of temporary shelters		
Fully reconstructed	232	99.1
Not yet started	2	0.9
Partially reconstructed	0	0
Total	234	100.0
Status of reconstruction of permanent shelters		
Fully reconstructed	1	0.4
Not yet started	193	82.4
Partially reconstructed	36	15.38
Total	234	100.0

Source: Field Survey, 2024

Table 4.12 shows that about 99.1 percent households, have fully reconstructed their temporary shelter. Only 0.9 percent of them are left to construct the temporary shelter, they have not even started the process. Looking at the status of reconstruction of permanent shelter, 82.4 percent households have not started the reconstruction yet. While 15.38 percent households have started the reconstruction of permanent shelter and only 0.4 percent household have already finished the construction.

This highlights that the construction works were effective in the initial phases i.e. upto temporary reconstructions, but in terms of permanent reconstruction, the process has almost stopped. Few initiations of the permanent reconstruction have been taken by the people themselves, while from the government side, efforts have been lower.

4.2.4. Communities' Restoration to Normalcy

Questions were also set to assess the status of social and financial situations. This provided the statistics about if the households have been back to normal days in terms of social and financial activities after the earthquake. This is important to evaluate the long-term impact of disaster and effectiveness of the recovery efforts. The following table shows how is the socio-economic recovery status of Barekot.

Table 4.13.: Status of Communities' Restoration to Normalcy

	Frequency	Percent
Back in the normal-social life after earthquake		
Yes	204	87.2
No	30	12.8
Financial activities restored to normal?		
Yes	2	0.9
No	232	99.1

Source: Field Survey, 2024

Table 4.13 shows that 87.2 percent households have returned to normal social life after the earthquake, while 12.8 percent households are still struggling to restore socially. On another hand, the restoration of financial activities seems low, with only 0.9 percent households have restored their financial activities to normal. A significant 99.1 percent households have not been able to normalize their financial activities.

As the earthquake created severe damage in Baretot, the ways of income generation seemed reduced. There seems to be lower access to financial resources and less opportunities. But the strong number of social restorations suggests that there is high social solidarity.

4.3. Initiations Taken by the Stakeholders

To collect data related to the initiations taken by various stakeholders, KII was administered. Here, the stakeholders reflect to the five categories of service providers: federal government side, local government side, non-government side, political parties and the private sector side. From the federal government's side, a representative from NDRRMA, a parliament member and a member from national assembly were chosen. Representative from non-governmental organizations, working in Baretot were selected as respondent. From the local government side, representative from Baretot rural municipality was chosen as respondent and from the private sector, a local businessman who worked for the disaster management in Baretot was chosen. Also, a representative from political party was considered as respondent. Their responses relating to the topic has been organized under the following structure:

4.3.1. Initiations Taken by Federal Government Side

Then-prime minister Pushpa Kamal Dahal reached to the earthquake-hit area the very next morning to assess the situation. President Ram Chandra Paudel, ministers, parliament members and top government officials frequently visited Jajarkot to assess the damages caused and situation of the affected people. First thing government initiated was initiating one window policy for relief distribution. The relief distribution was organized and lead by the government agencies. Government provided food and non-food items such as tents, blankets, clothes, sleeping bags, cleaning materials, medical items and necessities.

The federal government have made about 5200 temporary shelters in total, in Baretot Rural Municipality. Approximately Nrs. 127 million has been distributed to the affected households in Baretot. In total, more than 80,000 temporary shelters have been made by the government side, while approximately Nrs.3.5 billion money is provided for the temporary shelters. Federal government has decided of forming Task Force for Detailed Damage Assessment DDA, which is under progress. The assessment provides the amount of the damage in technical terms to initiate second phase of the reconstruction. i.e. permanent reconstruction. Government and its units

have visited to the affected areas, prepared detailed reports, to initiate the reconstruction process effectively. The issues are continuously raised in the parliament and other platforms to prioritize the re-construction process. The detailed Course of Action has been prepared by the government and it is under the process of being issued by the cabinet. Once, the Course of Action is issued by government, the second phase of reconstruction process will resume shortly.

4.3.2. Initiations Taken by Local Government Side

Local Government in Berekot had actively participated in the rescue and response works during the earthquake. Due to limited access to financial and material resources, they could not work as per their expectation on their own. But the local government worked actively in the equal distribution of the relief materials, listing out the beneficiaries and connecting them with the donor agencies. The coordination and communication with donor agencies and organizations become organized, the one window policy issued by the federal government was effectively implemented with the active participation of local level government. They are depending upon the federal government to immediately start the permanent reconstruction process in Berekot, but like the victims, local government also feel the same way that, central government is not paying attention to their issues.

Major challenge of the local government seems lack of resources to initiate the disaster management process on their own. There is no other way than waiting for federal government's initiation for the process. The local government feel neglected by the center. If the things go like this, Berekot Rural Municipality is uncertain about reconstruction period as it might take years to complete.

4.3.3. Initiations Taken by NGO Sector

Numerous non-governmental organizations have worked for disaster management in Berekot. Red cross, UNICEF, IOM, World Food Organization, Save the Children, World Vision International, The International Federation of Red Cross and Red Crescent Societies IFRC, United Nations Population Funds UNFPA etc. worked as international NGOs. While Hilly Region Development Program HRDP, Karnali Integrated Rural Development and Research Center KIRDARC etc. acted as local non-governmental organizations.

Non-governmental sector looks planned and structured in terms of disaster management process in Berekot. From immediate response and recovery, they are working effectively on the sector of livelihood development and reconstruction.

Despite government's delay, NGOs are mobilizing volunteers, working for rescue and recovery of victims, relief materials distribution and so on. It is seen that lots of skills development works, capacity building trainings and infrastructure development works are being conducted from the NGO sector. Despite the government side, organizations are working for the targeted population and showing results. NGOs are focusing on the need-based interventions in terms of housing, cash and non-cash support, awareness campaigns and trainings.

With the political affiliations and misuse of power, NGOs faced challenges during the relief materials distribution. Later, they were supported by the local government and active participation of the community people. As per the stakeholders from NGOs, it would be better if the government brings course of actions to coordinate with all the development organizations for better disaster management. If the government remains inactive, there is high chance that NGOs cannot act alone for longer time periods, leaving the disaster management process uncertain.

4.3.4. Initiations Taken by the private sector

After the Jajarkot earthquake 2023, the private sector contributed significantly to relief efforts. Most of the business houses provided support amount to the government's national relief fund. For eg. Bhatbhateni Supermarket Provided Nrs 1,11,11,111 and Ncell Provided Nrs. 50 lakhs to the national relief fund. People initiated the cash and non-cash support on their personal basis as well. From the help of private sector, over 1,500 families received food items like rice, lentils, and cooking oil, along with hygiene kits and blankets. About 200 temporary shelters were built by private sector, using locally available materials, focusing on helping the most vulnerable families. Medical teams like various hospitals and clinics treated injuries, provided counseling, and distributed hygiene kits and temporary toilets to improve sanitation in Barekot RM. Solar lights were provided to households without electricity. They provided special support to vulnerable groups like children, women and senior citizen. The most important is, damaged schools and public facilities were temporarily rebuilt with the support of Private sector.

Psychosocial support, especially for children and women, was a key focus, with activities like community counseling and setting up child-friendly spaces. These efforts were carried out in collaboration with local organizations to ensure the help was targeted and effective. The private sector's role complemented government and international aid, helping families rebuild their lives after the disaster.

4.3.5. Initiations Taken by Political Parties

The initiations shown by political parties cannot be neglected. After the Jajarkot earthquake in 2023, Nepal's main political parties helped in many ways. The Nepali Congress gave NPR 50 lakhs to the National Relief Fund. They mobilized more than 250 volunteers to the affected areas and helped the earthquake victims to clear the debris, to setup the temporary shelter and to distribute the relief materials. They built more than 1,000 temporary shelters. The CPN-UML also donated NPR 50 lakhs to national relief fund of government. They mobilized about 1,000 volunteers and made around 800 shelters. Similarly, The CPN-Maoist Center contributed NPR 50 lakhs and sent 200 volunteers to assist. The Rastriya Prajatantra Party RPP and CPN Unified Socialist also donated Rs. 25 Lakhs to earthquake victims.

Volunteers from these parties worked on rescue efforts and helped distribute food, water, and other relief materials. Their efforts, along with government and private support, provided much-needed help to families who lost their homes. Together, these actions showed how political groups can unite to support people in times of disaster.

After analyzing the information received from KII, it seems that the primary problem of disaster management has been created by the federal government. In more than a year period, government has not yet developed a course of action to further guide the reconstruction process. The lower level of government is obligated to wait for the federal government to initiate the actions. The local governments do not have enough resources to start the process on their own. The rights of disaster management have not been delegated to the provincial and local governments, which is a major challenge.

The initiations from the non-governmental sector have been appreciable, but it is a responsibility of government side to mobilize the NGOs and their programs effectively. The government should go hand on hand to implement disaster management policies. Individual efforts may not create greater values. The voice of the local government is no different from the victims. They are waiting for the center to start reconstruction process. With the limited access to resources, the local level has become ineffective in these processes.

4.4. Gap Between Service Delivery from Supply Side and Expectation from Victim's Side

To analyze the gap between service delivery and people's expectation, two basic concepts have been introduced. These are Perceived efficiency of disaster management practices and Perceived satisfaction of disaster management practices. The data collected has largely based upon Household Survey.

4.4.1. Perceived Efficiency of Disaster Management Practice

The efficiency of various activities related to disaster management was measured. Focusing on the dynamics of disaster management like Preparedness, Response, Recovery, Mitigation and preparedness, the perceived efficiency by the affected people was measured. The responses are measured in 5 liquid scales, where response 1,2,3,4 & 5 represents Very Slow, Slow, Neutral, Fast and Very Fast respectively. The table are designed based on the rating provided by the respondents.

4.4.1.1. Perceived Efficiency of Preparedness

Various aspects of preparedness like mobilization of emergency response team, food and non-food materials distribution and presence of government authorities were measured. This is presented in following table:

Table 4.14.: Perceived efficiency of Disaster-Preparedness

Items	Min- Max	Mean	SD	Skewness
Preparedness				
Mobilization of the emergency response team after earthquake	1-5	3.81	0.56	-1.33
Resources like food, water, tents distribution to affected areas.	1-5	3.78	0.57	-1.48
Quickly presence government authorities' e in the affected areas.	1-5	3.42	0.61	0.23

Source: Field Survey, 2024

The table 4.14 shows that mobilization of the emergency response team is felt fast, with an average score of 3.81. The responses are consistent, as shown by a low standard deviation of 0.56, and the negative skewness of -1.33 indicates that the people's response was normally distributed. The distribution of resources like food, water, and tents is also perceived as fast as it shows the average score of 3.78. The skewness is measured -1.48 showing that the response was also normally distributed. The quick presence of government authorities in the disaster preparedness is rated slightly lower by the respondents, with an average of 3.42. It indicates that, the

process was rated closer to neutral but moving slightly toward fast. There seems slightly more variation as shown by standard deviation of 0.61.

4.4.1.2. Perceived efficiency of Response

Disaster response includes the response related service deliveries like first aid and medical supplies assistance, restoration of life saving services, community-based operations etc. The perceived efficiency status is shown in the table below:

Table 4.15.: Perceived efficiency of Preparedness Disaster-Response

Items	Min- Max	Mean	SD	Skewness
Response				
Initiation of first aid, medical supplies and assistance.	1-5	3.49	0.57	-0.01
Initiation of the rescue operation after the disaster occurred.	1-5	3.53	0.59	-0.73
Communication between the response team and affected people	1-5	3.25	0.62	-0.11
Evacuation from the house and tent set-up for displaced people	1-5	2.17	0.56	1.21
Restoration of life saving services like electricity, drinking water	1-5	3.07	0.64	-0.36
Initiation of community-based operations during crisis period.	1-5	3.45	0.61	-0.78

Source: Field Survey, 2024

Table 4.15 demonstrates that the initiation of first aid, medical supplies, and assistance is perceived as slightly fast, with an average rating of 3.49. The skewness of -0.01 in the process shows that, the ratings are normally distributed. The initiation of rescue operations is also viewed as slightly fast, with an average of 3.53. Also, communication between the response team and affected people has an average rating of 3.25, which shows that it is closer to neutral. The standard deviation of the item is 0.62, and the skewness is -0.11, suggesting a balanced distribution in response.

Another item, Evacuation from houses and tent setup for displaced people is rated much lower, with an average score of 2.17. This shows that, the service is perceived slow. While the restoration of life-saving services has an average rating score of 3.07, indicating the service close to neutral. Its standard deviation is 0.64 and skewness is -0.36 which shows the natural distribution of the responses.

4.4.1.3. Perceived Efficiency of Recovery

In the recovery section, services required for the people to recover from the disaster were included. The services like assistance to restoration to normal situations, shelters buildup, permanent restoration etc. were rated by the people. The statistics is shown in the table below:

Table 4.16.: Perceived efficiency of Disaster-Recovery

Items	Min- Max	Mean	SD	Skewness
Recovery				
Provision of financial and material support to the affected people	1-5	2.35	0.57	0.58
Temporary shelter buildup for the displaced ones.	1-5	2.13	0.49	2.43
Re-start of telecommunication/radio services for the affected people	1-5	4.07	0.58	-1.41
Counselling and mental health services provided to the victims	1-5	2.83	0.56	-1.87
Restoration of earning activities in the affected areas	1-5	1.15	0.36	1.92
Community's return to normalcy after the disaster.	1-5	1.85	0.75	0.32
Permanent restoration of damaged houses and buildings.	1-5	1.05	0.28	6.27

Source: Field Survey, 2024

Table 4.16 shows the provision of financial and material support to affected people is perceived as slow as it has an average rating of 2.35. The standard deviation of 0.57 shows moderate consistency in responses. While temporary shelter buildup service was perceived slow with the rating of 2.13 in average. There is high skewness of 2.43, this means scattered distribution in the response provided by the households.

Re-start of telecommunication and radio services is perceived shows average rating of 4.07, indicating it as very fast. The standard deviation of 0.58 and the skewness of -1.41 reflects that the response provided by the recipients were normally distributed. Meanwhile, there is shown abnormal distribution in the response of Counselling and mental health services with the skewness of -1.87. Restoration of earning activities in affected areas is rated very slow, with an average rating score of 1.15. The standard deviation is 0.36 and skewness is 1.92 reflects more distributed response in this topic. The community's return to normalcy after the disaster is rated

slow, and Permanent restoration of damaged houses and buildings is rated very slow, with an average score of 1.05.

4.4.1.4. Mitigation and Prevention

In this section, the long-term vision of the government and other stakeholders were associated. Government preparedness, awareness and alerts system development and policy related services were asked for the respondents to rate. Table below shows the people's perception on these services:

Table 4.17: Perceived efficiency of Disaster Mitigation and Prevention

Items	Min- Max	Mean	SD	Skewness
Mitigation and Prevention				
Govt. communication for the preparedness from aftershocks.	1-5	3.07	0.53	-0.27
Alerts received after the earthquake to prevent further damages.	1-5	3.32	0.71	-0.34
Raised awareness about safety, earthquake resistant home designs	1-5	3.18	0.76	-0.61
Developed recovery related policy-plan-frameworks by federation	1-5	1.17	0.42	2.59
Developed recovery related policy-plan-frameworks by Province	1-5	1.07	0.3	4.76
Developed recovery related policy-plan-frameworks by LAPA	1-5	1.21	0.56	2.51
Developed recovery related policy-plan-frameworks by INGOs	1-5	1.55	0.66	0.91
Developed recovery related policy-plan-frameworks by NGOs	1-5	1.57	0.72	1.06

Source: Field Survey, 2024

Table 4.17 shows that, Government communication for preparedness after the earthquake is perceived as neutral but slightly fast. It shows an average rating of 3.07. The standard deviation for the service is measured 0.53 indicating generally consistent responses. Similarly, alerts received after the earthquake to prevent further damages have an average rating of 3.32, indicating that the services are perceived as slightly fast. The standard deviation is 0.71 and the skewness of -0.34 suggesting that the responses are normally distributed. Looking at the response, raised awareness about safety and earthquake-resistant home designs is also rated slightly fast as it has an average rating of 3.18. Its standard deviation is 0.76 and skewness is -0.61.

The development of recovery-related policy-plan-frameworks by the federation is perceived as very slow, with an average score of 1.17. Similarly, Policy frameworks developed by the province are rated even lower, with an average of 1.07; it is very slow for the efforts by LAPA with score of 1.21; slightly better by INGOs with average score of 1.55 and slow by NGOs, with score of 0.72.

The study suggests that the preparedness and relief operations were efficient, but the recovery and mitigation efforts were below the expectations of the community. A high number of responses in the ‘Neutral’ and ‘Slow’ recovery for the support area such as permanent housing rebuild, and economic recovery reveals that the efforts are inefficient. Precaution and mitigation measures seem lacking effective policy action and knowledge sharing about coping with the earthquake damages.

The elements of Preparedness looked more efficient among the four, meanwhile the most important one, recovery and prevention seem really neglected. The absence of mitigation frameworks and policies highlights a reactive rather than proactive approach to disaster management. To address this gap, the government must invest more in recovery processes, and improved coordination between government agencies, NGOs, and local communities.

4.4.2. Perceived Satisfaction of Disaster Management Practices

This assessed the satisfaction level of people on the practices done in different phases of disasters namely: preparedness, mitigation, response, recovery, and prevention. Five rating scales were set to measure the satisfaction level of public. The scales were Very satisfied, Satisfied, Neutral, Dissatisfied and Very Dissatisfied. Here, response 1,2,3,4 & 5 represents Very Dissatisfied, Dissatisfied, Neutral, Satisfied and Very Satisfied respectively. This provides insights on what kinds of disaster management programs are required for future to address the needs of the community. This is crucial to strengthen the relations between the stakeholders and communities in Barekot.

4.4.2.1. Perceived Satisfaction on Preparedness

The people’s satisfaction on preparedness of disaster from the government and non-governmental side was measured. Satisfaction scale presents the people’s way of perceiving the services and whether they are happy with them or not. The preparedness included planning, availability of emergency services, disaster warning and alert system and level of community awareness. Here is the table showing people’s satisfaction on preparedness:

Table 4.18.: Perceived Satisfaction on Disaster Preparedness

Items	Min- Max	Mean	SD	Skewness
Preparedness				
Government's preparedness/planning efforts before disaster	1-5	1.24	0.46	1.98
Availability of the emergency kits to cope with the disaster	1-5	1.55	0.54	0.38
Government's disaster warning and communication systems	1-5	1.48	0.63	1.58
Level of community awareness related to disaster preparedness	1-5	2.97	0.55	-0.47

Source: Field Survey, 2024

Table 4.18 shows that, people are very dissatisfied with the government's preparedness and planning efforts as it is rated with an average score of 1.24. The standard deviation of 0.46 and skewness of 1.98 shows that there is slight unequal distribution in the response. Similarly, people are also dissatisfied with the availability of emergency kits to cope with the disaster. It has an average rating of 1.55. The standard deviation of the response is 0.54, moderate consistency in the response.

Looking at the satisfaction scale of government's disaster warning and communication systems, people perceived it as very unsatisfactory, with an average score of 1.48. The standard deviation of 0.63 indicates more variation in responses. While the skewness of 1.58 reflects that there is a strong inclination of response toward dissatisfaction.

4.4.2.2. Perceived Satisfaction on Mitigation

The mitigation measures were presented to the respondents to rate. The following table shows people's perception about the awareness campaigns, infrastructure improvements and measures taken to reduce the vulnerability:

Table 4.19.: Perceived Satisfaction on Disaster Mitigation

Items	Min- Max	Mean	SD	Skewness
Mitigation				
Infrastructure improvements targeted to reduce future risks	1-5	1.24	0.54	2.65
Measures taken by local authorities to reduce risk vulnerability	1-5	2.16	0.61	0.24
Public awareness campaigns about disaster risks reduction	1-5	2.65	0.56	-0.9

Source: Field Survey, 2024

Looking at the table 4.19, Infrastructure improvements targeted at reducing future risks looks to be rated very dissatisfied, with an average of 1.24. The standard deviation of 0.54 shows and the skewness of 2.65 highlights that there is strong variation in the response. While Measures taken by local authorities to reduce risk vulnerability, have an average score of 2.16, indicating that the people are dissatisfied with the service provided. The standard deviation of 0.61 shows some variation, but the skewness of 0.24 indicates a fairly balanced distribution.

People show neutral satisfaction on public awareness campaigns about disaster risk reduction as there is 2.64 average rating. Here, the standard deviation of 0.56 indicates consistent responses, and the skewness of -0.9 in the response shows a feeling of perceiving higher satisfaction.

4.4.2.3. Perceived Satisfaction on Response

Response part include list of numerous support services from either government, or non-governmental sectors. Financial and material support services received were rated by the respondent in following way:

Table 4.20.: Perceived Satisfaction on Disaster Response

Items	Min- Max	Mean	SD	Skewness
Response				
Effectiveness of the rescue operations taken by government	1-5	2.27	0.54	0.91
Equal distribution strategies of the relief materials among victims	1-5	3.88	0.59	-3.22
Provided temporary shelter, food and other necessities after disaster	1-5	2.57	0.58	0.18
Availability of medical care, equipment and supplies	1-5	2.55	0.62	0.67
Coordination between the response team and affected community	1-5	3	0.82	-0.22
Communication between response team and affected community	1-5	3	0.85	-0.32
Logistic support provided by local government	1-5	2.96	0.77	-0.55
Logistic support provided by I/NGOs	1-5	2.87	0.58	-0.24
Logistic support provided by community people	1-5	1.8	0.64	0.41
Financial assistance provided by the local government authorities	1-5	1.08	0.4	5.49
Financial assistance provided by the I/NGOs	1-5	1.06	0.26	5.2
Financial assistance provided by neighboring community people	1-5	1.1	0.43	4.4

Source: Field Survey, 2024

The table demonstrates that, effectiveness of rescue operations taken by the government is rated as dissatisfied by most of the people, with an average rating score of 2.27. There is a standard deviation of 0.54 showing that the response was consistent. Meanwhile there is most satisfaction with the equal distribution strategies of relief materials. It shows average rating scale of 3.88. The high negative value of skewness -3.22 shows that the distribution was highly scattered.

The provision of temporary shelter, food, and other necessities is rated as closer to neutral with an average of 2.57. The availability of medical care, equipment, and supplies is rated similarly, with an average score of 2.55. Here, a standard deviation of 0.62, and a skewness of 0.67 is obtained. People have neutral satisfaction on coordination and communication between the response team and the affected community with average rating of 3. The standard deviations are 0.82 and 0.85, respectively, showing more variation in the response.

Looking at the logistic support provided, people are neutrally satisfied with an average score of 2.96. The standard deviation of the response is 0.77 showing that there is moderate variation. Logistic support provided by I/NGOs has a similar rating, with an average score of 2.87, a standard deviation of 0.58, and a skewness of -0.24. And logistic support from community people is rated low, with an average of 1.8. Financial assistance from local government authorities is rated very dissatisfied, with an average score of 1.08. Here, the skewness is measured 5.49, reflecting that the response was not normally distributed at all or have widely distributed. Similarly, financial assistance from I/NGOs is rated very low, with an average of 1.06 and a skewness of 5.2. Financial assistance from neighboring community people is also perceived as highly dissatisfied, with an average score of 1.1, and a skewness of 4.4.

4.4.2.4. Perceived Satisfaction on Recovery

The recovery section only included three important points regarding rebuilding infrastructure, emotional and psychological support and efforts to restore livelihoods. Satisfaction level of people in recovery services is presented in the table below:

Table 4.21.: Perceived Satisfaction on Disaster Recovery

Items	Min- Max	Mean	SD	Skewness
Recovery				
Rebuilding of homes and infrastructures post-disaster	1-5	1.04	0.25	8.01
Emotional and psychological support provided after the disaster	1-5	2.72	0.54	-1.03
Efforts to restore local business and livelihoods	1-5	1.8	0.57	0.03

Source: Field Survey, 2024

Table 4.21 shows that people show extreme dissatisfaction with an average score of 1.04. The responses are significantly distributed with very high value of skewness i.e. 8.01. Emotional and psychological support provided after the disaster is rated closer to neutral but is leaning toward satisfaction. It has an average rating of 2.72. While efforts to restore local businesses and livelihoods are rated dissatisfied, with an average score of 1.8. The standard deviation of 0.57 shows variation in the response.

4.4.2.5. Perceived Satisfaction on Prevention

The long-term disaster prevention services like redesigning infrastructures, long term disaster risk reduction strategies were asked to rate. The following table shows people's perception on these services:

Table 4.22.: Perceived Satisfaction on Disaster Prevention

Items	Min- Max	Mean	SD	Skewness
Prevention				
Government's role in initiating disaster prevention programs	1-5	1.7	0.66	0.42
Redesign local infrastructures to prevent disaster damages	1-5	1.05	0.27	7.07
Communication about long-term disaster strategies in your area	1-5	1.73	0.77	0.85

Source: Field Survey, 2024

Table 4.22 suggests that the people are very dissatisfied with the government's role in initiating disaster prevention programs. It has an average rating of 1.7. Similarly, redesigning local infrastructures to prevent disaster damages is also rated very dissatisfied, with a low average score of 1.05. A significant 7.07 skewness shows that there is a strong preference for the lowest ratings. Satisfaction rating of

communication about long-term disaster strategies in the area has not been seen different as is is rated with the average score 1.73. The standard deviation of 0.77 shows more variation in the response, and the skewness of 0.85 highlights a leaning of response toward higher ratings.

The study finds out that there is much dissatisfaction with Disaster Management in all phases. The recovery and prevention phase were rated very low in satisfaction scale. It can be concluded that the disaster management process showed lack of resource distribution, lack of communication, very slow implementation, and lack of strategic planning. This is because the level of preparedness was really weak and inefficient. The disaster management practice looked more reactive than proactive. To fill the gap, effective intervention is required from the government and non-governmental sector which focuses on timely and community-based reactions along with the sustainable solution.

Chapter V

Summary, Conclusion and Recommendation

5.1. Summary

Nepal experienced a massive damaged by a medium size earthquake (6.4 Magnitude) a year ago, centered in Jajarkot district of Karnali province, which was reported to be the biggest one since earthquake 2015. As a devastating disaster occurred after long, Jajarkot and nearby districts experienced huge loss and the process of disaster management, and its effectiveness seemed important to study. Three major objectives were set to conduct the study, which included the current status of reconstruction process, efforts made by the stakeholders to cope with the disaster and lastly the gap between the service provided by the suppliers' side and perceived experience of the demand side.

A mixed (qualitative + quantitative) approach was employed to gain a comprehensive understanding of the research topic. As the qualitative approach used key informant interview (KII) as a technique of data collection. On the other hand, households survey was conducted to collect the quantitative data from the field. For this purpose, three wards of Berekot Rural municipalities were chosen as samples. The data was analyzed and presented by mixing the findings obtained with both qualitative and quantitative approaches.

The study showed that in Berekot rural municipality, among the 234 households, only three ethnic groups were recorded. Most of the households were Chhetris with almost 45 percent population. Meanwhile, Janajati and Dalits are of equal volume of about 28 percent. Almost all the people in Berekot follows Hinduism while few of them follow Christianity. Majority of people in Berekot are illiterate, which is almost 40 percent of the total population. Even though, a similar portion is educated but they have just completed the primary level of education. Only feeble number of the respondent were recorded to have completed the higher secondary level of education. Only 8 households (about 3 percent) have at least received any trainings to support their livelihood.

People have fair ownership to the agricultural land but about two thirds of the land are rein fed, limiting the crop productivity. This results on the inadequate crop production and food insufficiency. A shocking 43 percent of households have food sufficiency for less than 3 months and similar portion have that for less than 6

months. Only 0.9 percent of households can survive for a year with their own crop production.

Income sources in Barekot is limited, almost all the people depend on agriculture product as major income source, while there is a significant portion of daily wage and remittance in the income sources. Combined about 81 percent household depend upon either daily wage or remittance. Very few of them depend up on government of private jobs as domestic entrepreneurship and local shops are also recorded less as an income source. Huge portion of the income goes into daily consumption. An average of Nrs. 90,000 is required to maintain the daily consumption of households in Jajarkot, which is beyond their average income. Besides that, clothing and cultural celebrations also recorded as major source of expenditure. People do not spend much on luxury and non-necessary items.

Barekot experience severe damages due to earthquake in terms of homes, with most houses were damaged completely. A significant of 85 percent people lost their house completely, while 15 percent of them saw slight damage on house. Other damages are not reported significantly as some of them experienced loss of livestock, food or commodity as well, the major hit sector has been houses of people. People's dependency for the reconstruction process is mostly in the government, reporting 91.5 percent people completely depends upon the government. Though temporary shelter has been constructed in 96.2 percent households, they have not received the relief amount provided by the government. Only 24.8 percent received the second installment of Nrs. 25,000 for temporary shelter. None receives any amount for the permanent reconstruction

In Barekot, 99 percent temporary shelters have been completely constructed. Only few people have started to reconstruct their houses on their own, but the reconstruction has not been completely completed yet. Social life in Barekot has mostly returned to normal. Most of the people reports that they have started the normal social life, as before earthquake, a small portion of 12.8 percent are still struggling to get back to normal social life. Almost all families have been unable to restore their income activities for stable living as before. Only 0.9 percent families have returned to financial normalcy.

The measurement scale shows that the recovery work has not been well efficient up to now as per their expectations. The preparedness and quick action to cope with the disaster is reported efficient, while response, recovery and mitigation

part has not been effective as per people's opinion. Majority of 63.7 percent households experienced the preparedness efforts made were comparatively fast.

Response part has not been the same as preparedness as majority households rate it as neutrally efficient. Another major portion felt it fast, which means the services has not been much slower to the affected people. The recovery part was reported even less efficient, which included the distribution of financial and material support for the reconstruction process. Among them, restoration of earning activities is seen very slow as most of the households rated that. Similarly, government's effort for the mitigation and prevention was experienced worse than any other components of disaster management. More than 80 percent household rated all the efforts as very slow.

The satisfaction rating shows that the affected people were mostly dissatisfied with the services provided. In terms of Preparedness, mitigation, response, recovery and prevention, most dissatisfaction comes for the recovery efforts. In terms of preparedness, 45.73 percent people marked their extreme dissatisfaction with the preparedness efforts by the government.

In the mitigation part, the status shows that feeble households are satisfied with the services provided. Only 1.28 percent people get satisfied with the mitigation strategy of the government while almost all the households got dissatisfied with it.

There was mixed perception of the people in response works. Almost all the households were extremely dissatisfied with the financial assistance and material support provided. The recovery and reconstruction part also resembles with the other dynamics of disaster management in terms of people's satisfaction. Almost all the people looked very dissatisfied with the rebuilding of the infrastructure post-earthquake. Only small portion, 1 percent people felt the services satisfactory. While almost all of them were dissatisfied with the efforts.

5.2. Conclusion

Disaster management is a big challenge for development. It requires every aspect of the development to restore and progress after the massive devastation. The Jajarkot earthquake also required huge efforts in the disaster management as per its destruction. Based upon the above-mentioned statistics, tables, figures and findings, this can be concluded that, the current status of the reconstruction process has only addressed the immediate needs of the people and has neglected the long-term needs such as housing, capacity building and community resilience. Temporary shelters and

emergency services has been constructed whereas, permanent infrastructures are yet to be started to reconstruct.

Government has shown poor performance to even distribute relief amount for the temporary shelters, whereas the construction of schools, parks and public areas are not even started. It has been difficult for the community to return to social and financial normalcy after the disaster. The government and non-governmental stakeholders claim the process of disaster management is going well, but the affected ones have not received the services accordingly. Government claims that the relief amount for the temporary shelters have already distributed to everyone, also all the temporary shelters have been made up to now. Meanwhile, the situation at the ground looks completely different than their claims. People's expectation and actual service delivery shows huge gap in between, which is shown in the satisfaction rating. Majority of the people said they are dissatisfied with the service and delivery provided by the government and non-governmental sector, as a part of disaster management. The people seemed to have bigger expectations than this in terms of delivering the services. The short-term response, recovery and relief works are somehow rated high by the people, whereas long term recovery plans and policies are not going as per the expectation of people.

5.3. Recommendations

As the thesis is prepared for the partial fulfillment of academic degree, it does not have macro level implications. Some micro-level implications of the study are suggested to policy level and for the future researchers as follows:

5.3.1. Recommendations for Policy Level

The government should immediately work on two major areas in Barekot. A clear Course of Action is the primary requirement to initiate the second stage of reconstruction works, i.e. reconstruction of permanent infrastructures. The course of Action should associate the actual needs of people in the affected areas, rather than just generalizing the overall scenario. The permanent reconstruction should consider the sustainability and people's participation.

Secondly, government should widely initiate the targeted interventions in terms of education, skills development and capacity building of the people. This will open the income generation opportunities for people and eventually builds up the community resilience and also, make the community capable of coping with the future possible disasters with less dependence on external agencies.

5.3.2. Recommendations for Future Researchers

This study focused more on disaster management efforts and people's requirements to cope with the disasters. There are more things to explore in this process which is not addressed in this study. Future researchers are encouraged to explore the psychological impacts of the disaster on community people. As Barekot being a very rural setting, people do not focus more on the psychological issues and most of the related problems go unnoticed, while generalizing the disaster management practices.

It would also be useful to investigate how skill, literacy rate and dynamic source of income will build the community resilience to cope with the future disasters. The relationship between community resilience and disaster management could give significant insight for future disaster management practices. In communities like Barekot, people's high dependency on outsiders for the reconstruction exposes the community resilience. Hence this would be a meaningful topic to explore.

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Appendixes

Appendix A: Recommendation Letter from the University

 TRIBHUVAN UNIVERSITY
त्रिभुवन विश्वविद्यालय
CENTRAL DEPARTMENT OF RURAL DEVELOPMENT
ग्रामीण विकास केन्द्रीय विभाग

विभागीय प्रमुखको कार्यालय
कीर्तिपुर, काठमाडौं, नेपाल।
Office of the Head of Department
Kirtipur, Kathmandu, Nepal.

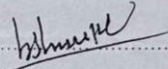
Ref. No.



Date मिति २०८१/०५/१४

जो जससँग सम्बन्ध छ।

यस विभागमा स्नातकोत्तर तहमा अध्ययनरत रोल नं. ०६ का श्री सुजन चालिसे विद्यार्थीले चौथो सेमेस्टर पुरा गरी Post Disaster Management Practice in Jajarokot विषयमा शोध कार्य गरिरहनु भएकोले अनुसन्धान तथा खोजकार्यका लागि त्यस कार्यालयबाट निज विद्यार्थीलाई आवश्यक सहयोग गरिदिनु हुन अनुरोध गर्दछु।



सह-प्रा.विष्णु बहादुर खत्री
विभागीय प्रमुख

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Appendix B: Household Survey Questionnaire

Namaskar!

Dear respondent, this study is completely a MA thesis work, and it does not carry any official record. This study will rely on your valuable responses. The information obtained from you during this study will not be used for any purpose other than research. Your responses will be kept confidential according to the data protection regulations of 2018. -

Sujan Chalise (The Researcher)

Name:

Contact no.:

Code no.:

Section A: General Information

1. Respondents' cluster: Ward No.....
2. Age of the respondent:
3. Sex of the respondent: Male Female
- Marital status: Married Widowed Single woman Married and
Divorce Janjati Dalits seperated
- Caste/ethnicity: Bhramin Oth
Chhetri er
6. Religion: Hindu Buddhist Kirat Christian Others, then please
specify.....
7. Your formal educational status: Primary Secondary Higher education Illiterate
8. Any training you have completed: Tunnel farming Pest management
 Goat farming Mushroomcultivation Bee keeping Tailoring
 Entrepreneurship development Saving and credit
9. Family system: Joint family Nuclear family
10. Total numbers of female members and total numbers of male
members.....
11. Number of school going children: Government school..... Private
school.....
12. Number of college going children: Govt. college/university.....Private college
.....
- 13: land holding status in Ropani: Irrigated land before earthquake.....and after
earthquake.....

Rain fed land before earthquake.....and after earthquake.....

14. Food sufficiency status: 3 months 3-6 months 6-9 months 9-12 months
 >12months

15. Annual income and expenditure of your family:

Income	NRs	Expenditure	NRs.
Local shop		Daily consumption	
Crop products		Clothing	
Government job		Cultural celebration	
Private job		Child education	
Daily wage		Medicine	
Remittance		Accessories/gold	
Others		Visit/pilgrimage	
Total		Total	

Section B: Damage Caused

Assets	Checkmark (√)	Market Value (NRs.)
16.1 House- Completely Destroyed		
16.2 House- Partially Destroyed		
16.3 Livestock		
16.4 Food		
16.5 Commodity (Gold, Silver)		
16.6 Liquid (Money)		
16.7 Others		
Total		

Section C: Current Status of Reconstruction Process

SN	Question	Checkmark	
17.1	Received the first instalment NRs. 25,000 for temporary shelter		
17.2	Received the second instalment NRs. 25,000 for temporary shelter		
17.3	Started the reconstruction process		
17.4	Completed the temporary shelter		
17.5	Get relief amount from the government for permanent shelter		
17.6	Started the construction of permanent shelter		
17.7	Completely dependent on govt./social organizations for reconstruction		
17.8	Received permanent reconstruction updated from government		
17.9	Received counselling and mental health services to cope with trauma		
17.10	Restored access to basic services like electricity, water and healthcare?		
17.11	Debris and waste materials cleared from the affected areas		
17.12	Public facilities (Parks, markets etc.) has been restored		
17.13	Dependent on for the reconstruction process	Self	
		Government	
		I/NGOs	
		Community	
17.14	Status of reconstructing permanent shelters	Fully reconstructed	
		Partially reconstructed	
		Not yet started	
17.15	Status of reconstructing temporary shelters	Fully reconstructed	
		Partially reconstructed	
		Not yet started	
17.16	Back in the normal-social life after earthquake	Yes	
		No	
17.17	Financial activities restored to normal?	Yes	
		No	

**Section D: Perceived Efficiency of Disaster
management Practices**

Rating Scale: 5 (Very Fast), 4 (Fast), 3 (Neutral), 2 (Slow), 1(Very Slow)

SN	Items	Response				
		5	4	3	2	1
18.1	Mobilization of the emergency response team after earthquake.					
18.2	Resources like food, water, tents distribution to affected areas.					
18.3	Quickly presence government authorities' e in the affected areas					
18.4	Initiation of first aid, medical supplies and assistance.					
18.5	Initiation of the rescue operation after the disaster occurred.					
18.6	Communication between the response team and affected people					
18.7	Evacuation from the house and tent set-up for displaced people					
18.8	Restoration of life saving services like electricity, drinking water					
18.9	Initiation of community-based operations during crisis period.					
18.10	Provision of financial and material support to the affected people					
18.11	Temporary shelter buildup for the displaced ones.					
18.12	Re-start of telecommunication/radio services for the affected people					
18.13	Counselling and mental health services provided to the victims					
18.14	Restoration of earning activities in the affected areas					

18.15	Community's return to normalcy after the disaster.					
18.16	Permanent restoration of damaged houses and buildings.					
18.17	Govt. communication for the preparedness from aftershocks.					
18.18	Alerts received after the earthquake to prevent further damages.					
18.19	Raised awareness about safety, earthquake resistant home designs					
18.20	Developed recovery related policy-plan-frameworks by federation					
18.21	Developed recovery related policy-plan-frameworks by Province					
18.22	Developed recovery related policy-plan-frameworks by LAPA*					
18.23	Developed recovery related policy-plan-frameworks by INGOs					
18.24	Developed recovery related policy-plan-frameworks by NGOs					

*Local Adaptation Plan of Action

Section E: Perceived Satisfaction of Disaster Management Practices

Rating Scale: 5 (Highly Satisfied), 4 (Satisfied), 3 (Neutral), 2 (Dissatisfied), 1 (HighlyDissatisfied)

SN	Items	Response				
		5	4	3	2	1
19.1	Government's preparedness/planning efforts before disaster					
19.2	Availability of the emergency kits to cope with the disaster					
19.3	Government's disaster warning and communication systems					
19.4	Level of community awareness related to disaster					

	preparedness					
19.5	Infrastructure improvements targeted to reduce future risks					
19.6	Measures taken by local authorities to reduce risk vulnerability					
19.7	Public awareness campaigns about disaster risks reduction					
19.8	Effectiveness of the rescue operations taken by government					
19.9	Equal distribution strategies of the relief materials among victims					
19.10	Provided temporary shelter, food and other necessities after disaster					
19.11	Availability of medical care, equipment and supplies					
19.12	Coordination between the response team and affected community					
19.13	Communication between response team and affected community					
19.14	Logistic support provided by local government after the earthquake					
19.15	Logistic support provided by I/NGOs after the earthquake					
19.16	Logistic support provided by community people earthquake					
19.17	Financial assistance provided by the local government authorities					
19.18	Financial assistance provided by the I/NGOs					
19.19	Financial assistance provided by neighboring community people					
19.20	Rebuilding of homes and infrastructures post-disaster					
19.21	Emotional and psychological support provided after the disaster.					
19.22	Efforts to restore local business and livelihoods.					

19.23	Government's role in initiating disaster prevention programs.					
19.24	Redesign local infrastructures to prevent disaster damages					
19.25	Communication about long-term disaster strategies in your area.					

Thank you for better cooperation!

Appendix C: Key Informants Interview Guidelines

Q.1. What are the initiatives taken by your side for response, recovery, and reconstruction?

Q.2. What kinds of policies, programs and framework were implemented to ensure timely and effective reconstruction process?

Q.3. What is the status of the reconstruction process at present in terms of housing, infrastructure, and public services?

Q.4. What are the challenges faced during the process related to funding, logistics, and community engagement?

Q. 5. How much time is estimated to complete the reconstruction process, and how would the work progress?

Q.6. How much time is estimated to complete the reconstruction process and how would be the final output?

Q.7. What are the current needs of the people in Barekot?

Q.8. How does the need of people change during the earthquake, response, reconstruction and recovery phases?

Q.9. How does the economic activities of people change before and after the earthquake in Barekot?

Q.10. How does the community resilience affect the reconstruction process in terms of efficiency?

Q.11. Why does the government apply reactive approach of disaster management rather than proactive approach and how much effective it came out?

Appendix E: Photo Gallery

Completely destroyed house in Barekot 3



Completely destroyed house in Barekot 1



Completely destroyed house in Barekot 1



Completely destroyed house in Barekot 2



Completely destroyed house in Barekot 1



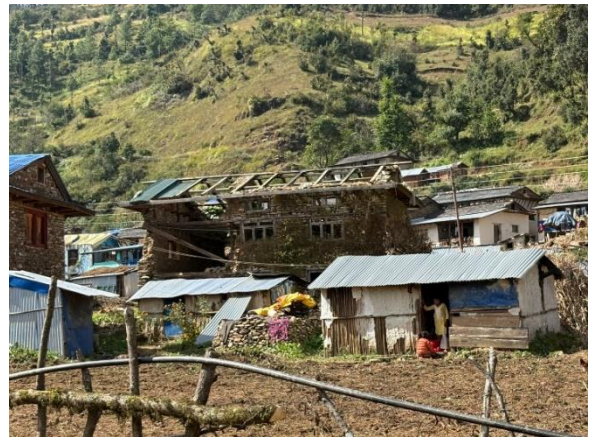
Researcher observing the damage caused



Partially destroyed temple in Barekot 1



Completely destroyed house in Barekot 1



Partially destroyed house in Barekot 1



Partially destroyed house in Barekot 3



Temporary shelter in Barekot 2



Temporary shelter in Barekot 3



Ward Chairperson, Barekot 1



Ward Chairperson, Barekot 2



Alcohol fermentation as a source of income at Barekot 1



People waiting outside the Bank to collect the relief amount



Researcher collecting the data at Barekot



Ward Chairperson, Barekot 3

