

Yuna Prajapati

Examining Roles and Impacts of Approaches Applied by NGOs and Government Agencies in the Owner Driven Housing Reconstruction after the Nepali Earthquake

The Case Study of Thecho, Kathmandu, Nepal

Master's thesis in Master's thesis in Urban Ecological Planning

Supervisor: Professor Emeritus Hans Narve Skotte

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Norwegian University of Science and Technology
Faculty of Architecture and Design
Department of Architecture and Planning



DECLARATION

I certify and that this is my own work and that the materials have not been published before, or presented at any other module, or programme. The materials contained in this thesis are my own work, not a "duplicate" from others. Where the knowledge, ideas and words of others have been drawn upon, whether published or unpublished, due acknowledgements have been given. I understand that the normal consequence of cheating in any element of an examination or assessment, if proven, is that the thesis may be assessed as failed.



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Date

Yuna Prajapati

Master's in Urban Ecological Planning

Norwegian University of Science and Technology

ABSTRACT

In case of disaster, both government and humanitarian agencies focus more on rural areas than in urban areas. This results in the delay and, in many cases, unmanaged reconstruction in the urban areas making urban areas more vulnerable. The primary objective of this research is to examine the role and impact of Government and NGOs in the reconstruction process in the historical urban settlement in Nepal. This research also involves the challenges and opportunities faced by the Government and NGOs in Owner-Driven Housing Reconstruction approach.

The study is one case study based on the historical urban settlement Thecho, which is still struggling with the reconstruction after the five years of a catastrophic earthquake. Thecho is one of the few settlements where two different agencies supported reconstruction with different reconstruction strategies and results.

The methodology used in the study is mostly qualitative, as it deals with the socio-economic aspects of the victims, and governance structure for reconstruction. Both primary and secondary data collection, such as semi-structured interviews, observations, and publications, has been used to understand the situation in the ground, governance structure, and role played by two different stakeholders.

On the one hand, the finding of the study reveals the limited capacity, excessive bureaucracy, lack of sound government in the urban context, which made it difficult for victims to rebuild and NGOs to work as well. On the other hand, the research also discloses the NGO's ability to work for the needs and issues of the victims working under the same policies of the government. The thesis highlights the significance of the grassroots approach for a better understanding of the grounds to make policies.

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ABBREVIATIONS AND ACRONYMS

CL-PIU	Central project implementation units
CBS	Central Bureau of Statistics
DRR	Disaster Risk Reduction
DL-PIU	District-Level Project Implementation Units
GoN	Government of Nepal
GMALE	Grang Management and Local Infrastructure
IFRC	International Federation of Red Cross and Red Crescent Societies
INGO	International Non-Governmental Organization
MOUD	Ministry of Urban Development
MoFALD	Ministry of Federal Affairs and Local Development
NGO	Non-Governmental Organization
NRA	National Reconstruction Authority
NSDRM	National Strategy for Disaster Risk Management
NRRC	National Risk Reduction Consortium
NDRF	National Disaster Response Framework
ODH	Owner-Driven Reconstruction
ODHR	Owner-Diven Housing Reconstruction

PDEF	Post Disaster Recovery Framework
UN	United Nation
UN-Habitat	United Nations Human Settlement Programme

1. INTRODUCTION

1.1 BACKGROUND

Nepal is the 11th most earthquake-prone country in the world, according to UNDP (2009). Nepal is prone to various the disaster, such as earthquakes, landslides, flood, and drought. Moreover, weak governance, poor infrastructure, limited resources (Rajbhandari, 2015), and financial constrain to support recovery programs are making victims more vulnerable. Nepal is reliant financially on donor agencies and human resources and grassroots initiatives from different national and international organizations to handle a successful post-disaster reconstruction.

On April 25 and May 12, 2015, two massive earthquakes measuring 7.8 and 7.3 Mw, hit Nepal, which was followed by hundreds of aftershocks. The earthquake killed around 8,790 people and destroyed 498,852 houses all over the country. The earthquake hit 32 districts, out of which 14 were severely devastated, causing loss of life and damaging different infrastructures. Three out of 14 districts, Kathmandu, Lalitpur, and Bhaktapur, are historic urban settlements in the Kathmandu valley. According to the report of the government, 1,05,442 houses were damaged entirely in Kathmandu valley. Most of the houses destroyed in the valley were in a historic urban settlement — more than 50% of the houses were traditional brick and mortar house, but lacking maintenance.

The government of Nepal established the National Reconstruction Authority on December 25, 2015, which was solely responsible for the reconstruction with a five-year timeframe. After the research of past international disasters such as the 2001 Gujarat and 2005 Kashmir earthquake, NRA adopted a highly satisfied and owner-driven housing reconstruction approach for private housing. NRA, with the help of different INGOs and NGOs, covered post-disaster housing reconstruction in both rural

and urban areas. However, even after five years, the NRA is still struggling with reconstruction in the historical urban settlements.

1.2 JUSTIFICATION OF RESEARCH

The topic was chosen as a research topic for a personal reason. I grew up in one of the historic urban settlements of Kathmandu valley, which is still struggling with reconstruction and the rubble remains of the five years ago event. There are many other historical urban settlements in the valley with the same story battling with the reconstruction. I chose Thecho as my case study because it is one of a few settlements in the historical urban settlements with the involvement of both government and NGOs in reconstruction.

Different international post-disaster researches have shown that rural areas are focused more than urban areas after the disasters(Daly, Barenstein, Hollenbach, & Ninglekhu, 2017), often neglecting the urban areas. The negligence often complicates the urban reconstruction (Daly, Barenstein, et al., 2017), which can also be witnessed in a historic urban settlement in Nepal. The reconstruction in these settlements is slow and expensive. The housing reconstruction in urban areas raises questions on the Owner-Driven Reconstruction approach, which was adopted due to the high satisfaction level with low -income families. There is little research regarding the slow pace reconstruction in the historical urban settlements in Nepal. The study will help to understand the reconstruction process and constraints of the owner-driven approach in the urban settlement context.

Hence, the research focuses on how the guideline prepared by NRA evaluates the ODR approach worked in the urban context of Nepal. This I do by assessing how the NRA applied the approach in settlement of Thecho as well as by discussing how an NGO

dealt with similar challenges in the same settlement. My research subsequently showed that the latter showed a higher level of user satisfaction than the former.

1.3 RESEARCH QUESTION

This research aims to understand the issues and challenges of post-disaster reconstruction in a historic urban settlement in Nepal. This has led to the design of the research question:

What is the role and impact of the owner-driven reconstruction approach in rebuilding the traditional urban settlement of Thecho Nepal, after the 2015 earthquake?

1.4 LIMITATION AND CHALLENGES

The study was limited as it was only a single case study presenting the comprehensive studies and analysis of the historical settlement in an urban context. The study has only interacted with one NGO working on the case site; hence the role of the NGOs could not be generalized from a broad perspective as it did not comprise other areas of the NGOs program such as infrastructure and livelihood. Furthermore, lastly, it was only limited to the fundamental principle of the ODHR approach adopted by the NRA.

One of the most apparent challenges was COVID-19 situations, which restricted my movements from the second week of March. I was planning to assist the social mobilizer to get in-depth knowledge, especially about the impact after the five years as victims were more open with the social mobilizer. However, I had to cancel my field visit and other interviews due to COVID-19. I had to change my plans and

conduct a phone interview. My findings on the impact of the earthquake were based on interviews conducted by social mobilizers.

Another challenge was getting accurate information from the victims. Some of the victims thought that I was working for the government. These victims were diffident to answer the questions, and some gave diplomatic answers. The experience was discouraging as few of these events disappointed me. However, I proceeded with the interview, and in the meantime, I learned that I needed to devote more time to get familiar with the victims, interview carefully, and identify someone confident enough to share their stories and experience.

1.5 STRUCTURE OF THE STUDY

There are seven chapters in this thesis. The first chapter is an introduction to the research covering the need for research, research problems, research objectives and methodology, and limitations and challenges of the research.

The second chapter discusses the theoretical perspectives on the ODHR and understanding of concepts on NGOs and their schemes in the post-disaster reconstruction of private housing. In the third chapter, I have presented the methodology used during fieldwork.

The fourth chapter explains the disaster governance in Nepal and the institutional framework for the reconstruction process in urban areas. It also discusses the NRA policies for I/NGOs to work in reconstruction sectors and further elaborate the impact on the urban areas.

The fifth chapter provides information about Nepal, provides an understanding of the Newari historic urban settlement, which indirectly affects the process of reconstruction. The chapter further describes the case site Thecho and discusses the

role and the different approaches adopted by the NRA and NGO in ODHR schemes. Chapter six analyses the finding of my research and the impact ODHR schemes had on the victim's life. The last chapter consists of discussions of the NRA and NGO approaches and concludes with the recommendation.

2. METHODOLOGY

This chapter presents the methodologies used during fieldwork to answer the research questions. The chapter further explains research designs and different data collections methods—the research was conducted from January 3 to March 14. The first week was dedicated to study the present reconstruction scenario and to understand the historical settlement before carrying the in-depth research of the case site.

2.1 RESEARCH DESIGN

The case study is a way of investigating the empirical topic by following the specific procedure within its real-life context(Yin, 1993). The research is a single case study of Thecho, a historical settlement in the urban core of Kathmandu valley. The case site Thecho is one of the few historical settlements in the urban core where both NRA and NGOs worked for the reconstruction. The research discussed the present situation of Thecho after five years of the earthquake and the role of NRA and NGOs in the reconstruction.

I chose both qualitative and quantitative methods for the data collections. Though I chose both methods, I focused more on the qualitative method as it involves the interpretive approach that makes the world visible (Denzin & Lincoln, 2011). Also, in a disaster, research field different organizations, including the UN, that emphasizes the qualitative methods(Jigyasu, 2002). For the accurate information of the case site, Thecho, it was necessary to get familiar with the settlement and earthquake victims, which could help in understanding their actual problems, victim's needs, and priorities. Different methods were used to define the present situation in the historic urban settlement, such as interviews, conversations, observation, photography, and memos to the self. The quantitative method was used in the form of a questionnaire-based survey to support findings with the data.

Secondary data was essential in my research since the study was done after five years of the events. The secondary data helped in understanding the reconstruction process and also cross-referencing in further evaluations.

2.2 DATA COLLECTING

The fieldwork for the data collections started after the five years of the earthquake. During these years, different events took place in reconstruction sectors —the establishment of NRA to oversee all the reconstruction work, change in political structure, and massive rebuilding all over the country. Before starting the fieldwork, it was significant to understand the disaster management and working policies and guidelines, present conditions, and issues of the reconstruction. Therefore, I started with the reports, surveys, documents from the government, as well as from different NGOs, newspaper articles, and academic research.

After understanding the NRA policies and current situation of reconstruction all over the country, I started transit work and observations with the informal interactions with the locals in a different Newari historical urban settlement for the current scenario study as my research is focused on the urban core of the Kathmandu valley. I visited Bhaktapur, Shakhu, Bungmati, Khokana, and case study site Thecho for a comprehensive study of the historical urban settlement. The study in these historical settlements supported in receiving in-depth insight into the local context, present scenario in the reconstruction of the historic urban settlement, issue obstructing the accomplishment of reconstruction in all these years, and base for further research.

I surveyed 30 households before interviewing them to understand the satisfaction level of victims associated with both NRA and NGO Lumanti Support Group for Shelter. The organization supported the reconstruction of 125 houses in Thecho.

Another objective of the survey was to get the quantitative data to identify the issues, socio-economic conditions, and perspectives towards NRA and Lumanti.

I held the semi-structured interviews with three different stakeholders: NRA officials, Lumanti employees, and residents of Thecho. The questionnaire inquiries about the ODHR schemes, assistance provided by the government, and other issues in reconstructions.

1. Lumanti

Interview with Lumanti helped to get an insight into the NGO's role in ODHR in Nepal and the limitations of the NRA policies and guidelines in a historic urban settlement in post-disaster reconstruction. The interview acted on the significance of the participatory process, the assistance provided by NGO for consultancy, documentation, and workshops and their experience in reconstructions with both victims and NRA —they communicated with victims, local government, and NRA leaders. My interview also focused on the perspective of the victims and the NRA's role in the reconstructions.

2. Victims

I interviewed 30 households associated with both the NRA and NGO. The interviews with the residents were useful to understand the reality of the reconstruction in the field. I interviewed people from different age groups and economic status to get victim's perspectives on the ODHR. The interview focused on their satisfaction level on the ODHR schemes in the technical and financial assessments, the involvement of the NRA and NGO, and challenges faced during the reconstructions. During these interviews, many old aged participants shared their life stories, which was another essential part of the data collections as it helped me to understand society. Life stories

provided a better understanding of the case area before and after the earthquake and the challenges they faced during the recovery phase.

3. NRA and local government

I conducted interviews with various NRA employees' different levels, such as Municipality, ward office, Central project implementation units —NRA bodies responsible for the reconstruction of housing and communication with INGOs & NGOs, and District project implementation units, which work under CL-IUP in district level. Altogether I interviewed 11 government employees. The interview with CL-IUP and DL-IUP provided perceptions of NRA on the framework adopted for disaster management and their challenges to achieve the target on the given timeframe. Furthermore, interviews of the NRA employees at the local level focused on the role of NRA, assistance provided by NRA, relations with the stakeholders, and attitude of the public towards the reconstruction policies. I summarized all interviews with victims and NGOs regarding the issue's dissatisfactions with guidelines and discourse of the NRA for a better understanding of issues. Moreover, it also helped to understand the new strategies to complete the reconstruction in the coming years.

Besides, I also got a chance to spend a day with the social mobilizer mobilized by the NRA as a door to door service. The social mobilizer was appointed one month before I started my fieldwork. Since the social mobilizer was from the case area, the interviewees were more comfortable with answers that helped me to conduct an in-depth interview.

3. LITERATURE REVIEW

This chapter is about the theoretical discussion that describes the existing knowledge of the area of topics. The literature review covers two important element housing and the Owner -Driven Housing reconstruction approach.

3.1 HOUSING

Housing is defined as a space for the shelter. However, it is more complicated than space as it is associated with livelihoods, health, education, security, and social and family stability (Barakat, 2003). The housing defines the social, cultural, and economic relationship of the people living in these houses(Jha, 2010). Housing in many developing countries is the expressions of the society, culture and the livelihood — in many countries like Nepal, India creating the space according to their social-cultural aspects such as a ground floor for the storage for the grain or livestock or workshop demonstrating it to be more than a space for shelter (Vahanvati, 2017).

During the disaster, houses are the most damaged or destroyed ones (Ahmed, 2011). According to the world bank data, in two decades, 1980-2000, 141 million people have been rendered homeless, and 97.7% of these people are from developing countries. Housing is the most valuable asset in developing countries (Gilbert, 2001)as people often use their lifetime income to build houses (Schilderman, 2010). The housing and the victims are more vulnerable to disaster (Gilbert, 2001)because of the poor disaster risk management policies, lack of financial and infrastructural resources.

3.1.1 Post-disaster housing Reconstruction

Post-disaster housing reconstruction high uncertainty (Vahanvati, 2017) and can create further vulnerable victims without planned and well-coordinated implementations (Chang, Wilkinson, Potangaroa, & Seville, 2010). In developing countries, PDHR often faces different challenges in implementation due to shortfall of the existing disaster institutional structure, fund issues, unmanaged resources such as material, builder and labor, and high level of corruption and institutional bureaucracy (Ahmed, 2011). Adding to these challenges, PNDR is affected by building codes and standards, and time limits (Davidson, Johnson, Lizarralde, Dikmen, & Sliwinski, 2007) contribute to the uncertainty and vulnerability of the poor.

After the disaster, the national and local governments and different humanitarian organizations launch different projects (Davidson et al., 2007) for an emergency, temporary, and permanent housing. However, PDHR is not the same as an emergency or temporary settlement as permanent housing reconstruction —involves cultural, social, and economic dimensions that define the identity of a family, making it more complicated. In many developing countries, PDHR tends to fail due to the lack of understanding of the local context by implementing agents. Hence the government, NGOs, and donor agencies have adopted the ODHR approach —owners are responsible for the construction and NGOs, and the government only provides financial and technical assistance (Ahmed, 2011).

Many developing countries do not have the institutional and fiscal capacity for the urban post-disaster reconstructions (Hong & Brain, 2012). Only less than half of the population can afford reconstruction, increasing vulnerability (Schilderman, 2010). In most of the case land tenure and registration, lack of capacity to enforce standards adequately and complicated bureaucracy for approval process decrease the rate of

success in poor urban areas. Hence to overcome such issues, it is essential to address these in the disaster mitigations in urban areas (Schilderman, 2010).

3.1.1.1 The role of NGOs in PDHR

For the last few decades, NGOs have become an essential agency in humanitarian assistance that works all over the world. It plays an essential role in the disaster from emergency response to the reconstruction stages. The NGOs with the grass-root structure have better local knowledge and victim's participation, which plays a crucial role in addressing the disaster-related issues in different stages with sustainable impacts on the victims(Mubah, 2013).

In addition to grassroots communication, NGO also provides training, policy research, and advocacy, mostly for a marginalized group. The government collaborates with NGOs to reach out to more victims in times of disaster, as NGOs can mobilize more human resources for response and mitigation than the government. Moreover, NGO's ability to reach more victims enables them to encounter a different issue (Behera, 2002)mostly neglected by governments. NGO was an essential player in PDHR of many developing countries, such as the 2001 Gujarat earthquake and, 2004 tsunami in Srilanka.

3.1.1.2 The role of the government in PDHR

The government is responsible for the safety and security of its people after the disasters and how it carry out its role depends on its human resources and the nation's infrastructure(Wong, 2012).

UN Resolution 46/182 states, *"Each State has the responsibility first and foremost to take care of the victims of natural disasters and other emergencies occurring on its territory. Hence, the affected State has the primary role in the initiation organization, coordination, and implementation of humanitarian assistance within its territories."*

The statement describes the role of government in disasters.

Based on the report of International Federation of Red Cross (IFRC), ALNAP described the role and responsibility of government in the disaster; first calling a crisis and inviting international aid, second providing assistance and protection, third monitoring and coordinating external assistance, and finally setting the regulatory and legal frameworks governing relief assistance (cited in (Mubah, 2013; Wong, 2012)).

3.1.1.3 Post-disaster housing reconstruction in Nepal

In Nepal, after the earthquake 2015, National Reconstruction Authority was established to work on reconstruction. NRA adopted the ODHR approach for private housing, placing victims at the center of reconstruction. NRA, along with different NGOs, INGOs, and other agencies, worked on the field of reconstruction both in rural and urban areas. According to the NRA report, the involvement of both NGOs and NRA in rural areas facilitated to complete more than 80% of housing reconstruction in those areas in five years.

However, the scenario is divergent in the urban areas as victims are still struggling with the PDHR. The involvement of the NGOs is comparatively low in urban areas. Only a few NGOs are involved in the historical urban settlement, for instance, Bungmati in collaboration with UN-Habitats, Thecho, and Machhegaun with NGO Lumanti and Pilacchen with NGO Maya Foundations were few examples. Even after

the partnerships with NGOs and NRA, the reconstructing in these settlements have not been completed yet.

3.1.1.4 Different approaches for PDHR

Post-disaster Housing reconstruction can be undertaken through different approaches depending upon the different reconstruction factors that affect the victim's security for the long term such as costs, improvement in housing and community safety, restoration of livelihoods, political milieu, cultural context, and people's own goals for well-being, and capacity of the affected area (Jha, 2010; Vahanvati, 2017). The main approaches are:

1. Community-Driven Reconstruction (CDR)

In this approach, the local community is at the center with assistance from an agency. In CDR, the community plays a critical role in planning, supervision, and monitoring of the project (Cliffe, Guggenheim, & Kostner, 2003). Moreover, the community is involved in decision making, designing, material selection, distribution of building materials, and construction supervision (Jha, 2010). The approach was adopted by UN-HABITAT in Aceh, Indonesia, following the 2004 Indian Ocean tsunami, in the city of Ocotal, Nicaragua, to relocate and rehouse residents of displaced neighborhoods and highly vulnerable sites following Hurricane Mitch in 1998. Several NGOs also adopted it in the 2001 Gujarat, India Earthquake; However, according to Jha (2010) the satisfaction level was lower than ODR.

2. Agency-Driven Reconstruction in-Situ (ADRIS)

ADRIS is a contractor-based approach where government and non-governmental bodies hire a contractor for reconstruction to design and rebuild. ADRIS is primarily for the public agency reconstructing government-owned housing, on public property. The owner can also hire the contractor and rebuild it with the framework of ODR. The owner can have some degree over the decision making in design and materials. However, it is not suitable for the large-scale single-family reconstruction as it can be costly with poor construction quality. ADRIS has been the traditional approach in post-war/post-disaster reconstruction at least the last 50 years. It changed in the first decade of 2000 due to experiences from the Balkans and the Tsunami reconstruction. However, it was still adopted by many international NGOs, and private companies applied ADRIS in 2001 Gujarat, India, Earthquake, and also in Tamil Nadu following the 2004 Indian Ocean tsunami(Jha, 2010).

3. Owner-Driven Reconstruction (ODR)

In ODR, the government or donor provides the victims with financial and technical assistance to reconstruct the house themselves. The owners can build themselves or employ labor to complete the reconstruction. The owners are the decision-makers and responsible for constructions(IFRC, 2010). The main aim of ODR is empowering the victims to rebuild and improve their skills and self-confidence. The World Bank and most INGOs and NGOs used the ODR approach after the 2004 Indian Ocean tsunami in Thailand and Sri Lanka after initially having applied the traditional ADRIS approach. It was further applied after the 2005 North Pakistan earthquake and the 2001 Gujarat, India Earthquake, and the provided high level of satisfaction(Jha, 2010).

3.2 OWNER-DRIVEN HOUSING RECONSTRUCTION (ODHR)

3.2.1 What is owner-driven housing reconstruction?

ODHR for the families and communities can be defined as a process where victims rebuild their houses, through conditional financing, and technical, material, social assistance accompanied by regulations and policies (Jha, 2010).

At the 1976 Habitat conference, the housing reconstruction policies were changed from supply-driven to support driven (Lyons, 2011), that is, ODHR, also known as 'self-help. It is an approach that prioritizes the victim's needs and places it at the center of decision-making in reconstruction and rehabilitation (Barakat, 2003; IFRC, 2010). With this, ODHR aims to restore self-confidence by transferring agency to the house owners and use their skills, time, and money on rebuilding their house on the original plot.

The one misconception in the owner-driven reconstruction is that owner-built their house. However, it is not necessary, and in most cases, an owner hires skilled labor for the reconstructions, which also benefited the local economy and job opportunity after the post-disaster (Barakat, 2003). The ODHR approaches have several other positive aspects, such as excellent owner satisfaction, cost-effectiveness, quickness, and participation from both owners and communities that ascertain it to be better than other approaches. However, in order to succeed, the ODHR needs to provide the framework with the guidelines that focus on the financial and technical guidelines, dialogue among all stakeholders, community participation at all stages, adequate bylaws, and quality control for safe reconstruction. Moreover, ODHR provides support to vulnerable groups with sufficient financial and technical aid for safe and sustainable reconstruction. (Royo Olid, 2017).

Even though ODHR aids at multiple levels, it also entails some risks that have long term effect on the marginalized livelihood such as dependency, indebtedness, and low

sustainability (Bank, 2012; Royo Olid, 2017). ODHR program has been challenging for houses where engineered building, or multifamily housing. To address such challenges and ensure the success, the government and agencies need to establish the system focusing on the training mason, enforcement of building codes and construction guidelines, adequate financial and technical assistance, and regular inspections (Jha, 2010).

3.2.2 The fundamental requirement of ODHR

International Federation of Red Cross and Red Crescent Societies categorized three fundamental requirements for housing ODHR:1) participatory process of decision-making, (2) adequate technical support, and (3) adequate financial assistance. IFRC used these concepts to prepare guidelines for ODHR (IFRC, 2010).

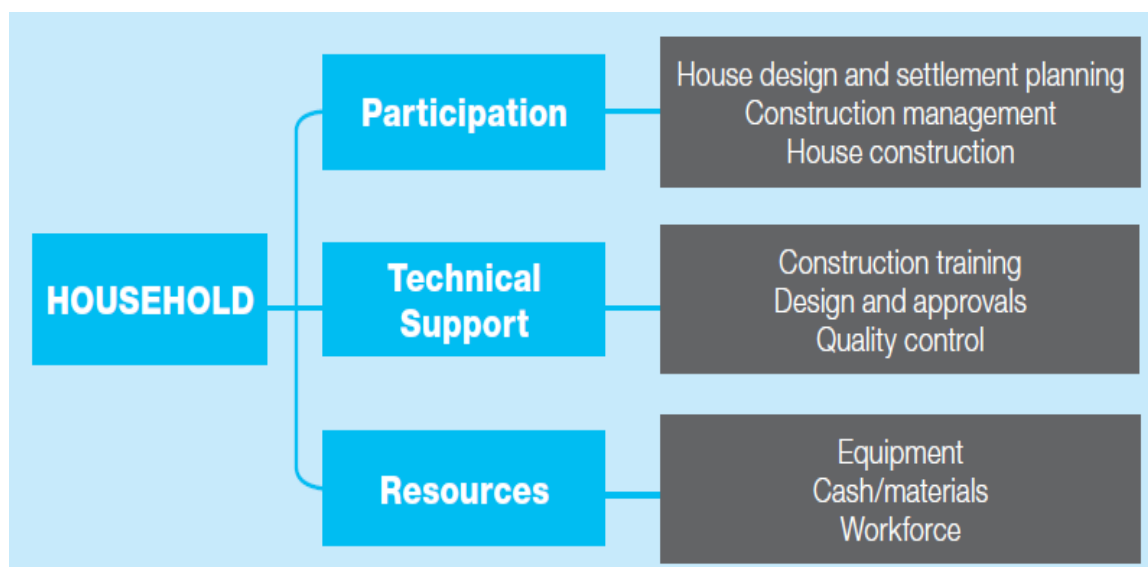


Figure 1: Sample set-up for housing, community infrastructure and livelihood programmes (Source: (IFRC, 2010))

1. Participation Process:

The participation process includes the victims in decision making and generating an understanding of the institutional framework. Participatory process guidelines emphasize:

- a. Communicating effectively with the victims
- b. Community and individual participation, especially vulnerable group
- c. Consultations and transfer of decision making
- d. livelihood analysis and support.

2. Technical Assistance:

Structural safety is the priority in the reconstruction process, and monitoring and inspections at all stages are a must to ensure safety in a future disaster. IFDR focused on quality control, which includes the design, training of laborers, and identification of material quality.

3. Financial Assistance:

The grant amount must be sufficient, and the distribution of the grants must be safe and effective through different financial and social institutions. Financial assistance can also be provided in the form of material where cash is not an option. The number of installments and amounts of grants differs from time to time at the field level; hence the installment, time, and amount should be revised according to the locality.

3.2.3 Application of ODHR

The application of the ODHR is stated in the late 1960s after the Peruvian earthquake and is known as "aided self-helping housing," which supported the housing reconstruction by its residents (Ratnayake & Rameezdeen, 2008). The ODHR has been used in different post-disaster reconstruction, mostly in developing South Asian countries. The ODR was popular after the success in the 2001 Gujrat Earthquake with a high satisfaction level from the victims. After that, the ODHR model was used in many countries such as Iran in the 2003 Bam Earthquake, Indian ocean Tsunami in 2004 in Sir Lanka, Thailand, and Indonesia, 2005 Pakistan Earthquake.

Many international Donors and INGOs such as ADB, UN-Habitat also advocate this approach (Royo Olid, 2017). Moreover, after witnessing the success rate and satisfactory level from victims, Nepal also decided to adopt the approach for the post-disaster reconstruction after the 2015 earthquake. NRA provided the cash assistance of NRS 3,00,000(USD 2500), government-instituted support mechanisms for technical, material, supervisory, training, and social facilitation to encourage homeowners to complete the reconstruction in both rural and urban areas. Along with the NRA, different INGOs and NGOs participated in reconstructions. However, after the five years of the earthquake, the reconstruction of housing in urban areas is still lagging. This indicates the lack of institutional knowledge and understanding of the ODHR in urban areas.

Moreover, it also shows the need to understand the role of different stakeholders to speed up reconstruction in urban areas. To date, there has been little research on the interactions and the challenges to speed up the reconstruction in ODHR in an urban context. Hence, there is a need to ground the present research in the case of Nepal.

4. DISASTER GOVERNANCE

4.1 DISASTER GOVERNANCE IN NEPAL

The Natural Calamity Relief Acts in 1982 was the country's first disaster management policy. Later, the Local Self-Governance Act was introduced in 1999, focusing on the decentralization of the government authority and power transfer to the district, municipal, and local levels; to formulate and execute the plans. The act encouraged participation and collaboration with public partners in a local development project in all the regions and the participation of different government agencies in development work (Daly, Ninglekhu, Hollenbach, Dwayne Barenstein, & Nguyen, 2017). The Natural Calamity Relief Acts 1982 and Local Self-Governance Act 1999 is a crucial foundation for the other disaster management policies in the case of Nepal (Shrestha & Pathranarakul, 2018).

In 2005 GoN committed itself to implement the Hyogo Framework for Action (2005–2015) as a national level framework, and in 2009, GoN developed a National Strategy for Disaster Risk Management. It offered strategic direction to the preparedness, response, rehabilitation, and mainstream Disaster Risk Reduction (DRR). Another Sendai framework (2005-2015), which was adopted in the Third UN World Conference on Disaster Risk Reduction, was also included in the DRR. Sendai framework focused on disaster management, livelihood, and health (B. Sharma, 2016). National Risk Reduction Consortium was set up in 2009– built on National Strategy for Disaster Risk Management(NSDRM), and it collaborated with different international donors and private partners for long term disaster risk plans and policies (Nepal, Khanal, & Sharma, 2018). National Disaster Response Framework 2013 is another policy that clarifies the responsibilities of the government and non-government agencies during disaster management.

In 2017, the government replaced the 1982 National Calamity Act's institutional structure with Risk Reduction and Management Acts 2017 to correspond with the new federal government structure. The newly revised acts focus on the different stages of disaster management – preparedness, response, mitigation, and rehabilitation. The Acts has provided a well-structured provision from central to the local government, which was supposed to change the working structure at national, provisional, and local levels with the time(Nepal et al., 2018).

4.2 DISASTER GOVERNANCE AFTER 2015

After the first Earthquake on April 25, all the government agencies, national, regional, and local levels participate in the rescue and relief. According to the report of the Institute of Engineering (IOE), trained engineers and engineering students developed a Rapid Visual Damage Assessments (RVDA) technique. National Engineer's Association expanded this training and mobilized hundreds of volunteer engineers for damage assessment of residential houses in urban areas of Kathmandu valley. The damage assessment evaluated the safety level of a residential building to avoid unsafe buildings (Hub–Nepal, 2016). The RVDA helped to decrease the number of casualties in the second powerful earthquake by creating awareness to avoid risky buildings(Hub–Nepal, 2016).

The GoN provided the initial relief fund of USD 150 for temporary shelter support in June, and an additional USD 100 for winter refund in October with the help of the list provided by the ward level. By mid-June 2015, GoN announced the end of the relief operation and the start of planning for post-disaster reconstruction (Sapkota, 2018).

The GoN established the National Reconstruction Authority in August 2015 to be responsible for the post-disaster reconstruction but without legal status. NRA was

revived in December 2015 with legal status and organization structure. Between September and December, the reconstruction was led centrally by the Ministry of Federal Affairs and Local Development (MoFALD), the Ministry of Urban Development (MOULD, and local government such as the ward office. However, in the absence of NRA, the reconstruction work was halted as it lacked proper policies, victims list, bylaws, and building code (Daly, Barenstein, Hollenbach, & Ninglekhu, 2017).

In May 2016, Post Disaster Recovery Framework, a master plan for the reconstruction of destroyed and damaged settlements, was introduced. PDEF is a five-year recovery framework prepared under the guidance of the Steering Committee of the NRA with the guidelines for the reconstruction. The other international reconstruction, such as Earthquake of Gujrat, Bam, Kashmir, and Tsunami in Sri Lanka, influenced the framework. The framework focused more on owner-driven reconstruction projects and equal allocation of financial and technical assistance(GoN, 2016).

4.3 INSTITUTIONAL FRAMEWORK

As per the local self-governance act 1999, NRA incorporated different ministries to implement the reconstruction project in each period. The ministry includes the MOULD, MoFALD) Ministry of Education, and Ministry of Culture, Tourism, and Civil Aviation. NRA established central project implementation units (CL-PIUs) for housing and urban settlements and public buildings. CL-PIUs had permission to implement the reconstruction projects at the district level

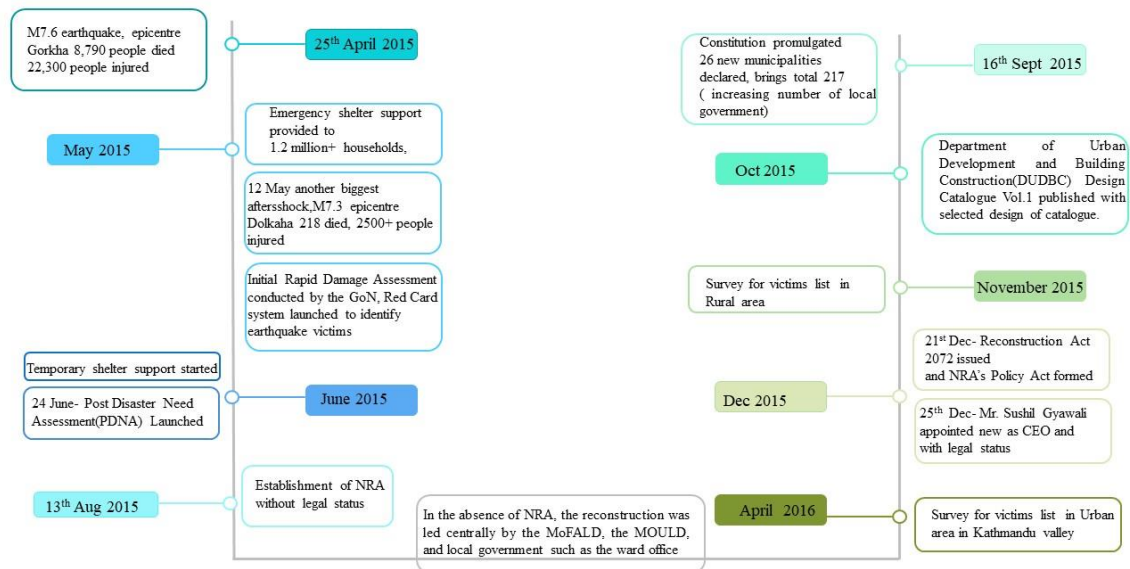


Figure 2: Disaster Governance timeline after earthquake 2015 ,Nepal (Source: Author)

The MoFALD and CL-PIU were responsible for facilitating payments of housing grants, MOUD, and CL-PIU for defining housing standards and designs, revising, and approving training, and coordinating technical assistance across the program. NRA established District-Level Project Implementation Units (DL-PIU) in all affected 14 districts to include local government and Community Based Organization (CBO). NRA also established 160 Local Research Centres (LRCs) to support the CBOs and build the capacity of NGOs, donors, and CBOs and support in the training, communication, technical support, victims enlistment, social mobilization, and report (Daly, Ninglekhu, et al., 2017).

The local government was a significant stakeholder in the housing reconstruction. As per the NRA guidelines, every municipality should include a 'mobile technical support team,' consisting of engineers and sub engineers to provide technical support during construction and social mobilizers for advice regarding the NRA guidelines.

However, rules and regulations are not appropriately executed in urban areas due to different factors such as limited human resources and financial constraints as funding is offered conditionally by donors and inflexible bylaws in urban areas. Even the CEO of NRA in March 2017 stated the governance structure of being ineffective in disaster management as it lacks the resources. Also, the "top-down" approach in the governance structure that lacked experience and no proper knowledge of the ground had made the structure inflexible and unsuccessful in the urban settlements.

4.4 RECONSTRUCTION POLICY FOR PRIVATE HOUSING

1. Land ownership:

Landownership certificates are essential documentation to receive grants and other facilities for victims. Emergency relief was provided without these documents; however, for the reconstruction grant and soft loans, victims required the land certificates. The land ownership certificate for the reconstruction is complicated as it is also related to multi ownership, especially in a historic urban settlement. After many complaints from victims, the NRA is revising its landownership policies to enable more victims for reconstruction.

GoN, and the Ministry of Land Reform and Management (MoLRM) also opened the registration of land after the earthquake for a month and a half – so that the families could apply for a formal land title ownership certificate.

2. Financial Assistance:

The victims must sign a housing agreement with the government or the INGOs and NGOs they are associated with to receive a housing grant of NRS.3,00,000¹. NRA increased the grants from NRS2,00,000 (USD.1675) to NRS.3,00,000(USD 2500) when the government changed in 2017. Victims would get the grants in three installments — first, at the plinth level, second at roof level, and third after the complete construction. To get the grant, the house owner needed land ownership certificates, citizenship certificate, architectural and structural drawings and documents for grant approval from NRA engineers. NRA has announced an additional NRS 50,000 to vulnerable groups and houses with traditional facades in historical urban settlements. The grants are the same in both rural and urban areas. NRA opened bank accounts for all the victims so that victims could receive money without any complication.

For soft loans, NRA, and Nepal Rastra Bank, the central bank of Nepal, made a provision of providing a loan of 2.5 million Nepalese rupees in urban areas. The soft loan was only at 2% for five years period for all the victims.

¹ A house for a four family in the traditional urban settlements costs between US\$ 30,000 and US\$ 40,000. This estimate is based on the rebuilding plan prepared by a community reconstruction committee of one of the Newari settlements(Daly, Barenstein, et al., 2017)

Table 1:Grants in three installments

Tranche	Inspection	Grants
1st tranche	Plinth level	NRS.50,000(USD 418)
2nd tranche	Roof level	NRS.150,000(USD 1256)
3rd tranche	Complete construction	NRS.100,000(USD 837)
Vulnerable groups	Complete construction	NRS.50,000(USD 418)

3. Technical assistance:

NRA, CL-PIU, and DL-PIU-Building were established to provide technical support and monitoring during the reconstruction phases. MOUD, CL-PIU MOUD, and DL-PIU mobilized engineers, sub engineers, a trained mason, and Social Mobilizer in every ward office to inspect houses in the reconstruction process. This 'mobile technical support team' would inspect the houses for the grant support in the reconstruction of housing based on grant distribution guidelines,2072. NRA also had to a third-party monitoring team to inspect the quality of reconstruction and monitor the activities of the technical assistance team to ensure the construction is according to the National Building Code.

4. Participation process

Information sharing is an essential part of participation in post-disaster reconstruction. NRA developed a communication strategy in collaboration with government agencies, as well as developing and implementing partners. The communication strategies mainly focused on information on financial aids, technical processes, and the ODHR process. NRA changed the elements of communication strategies during their five years period according to the change in their reconstruction strategies. NRA used the following strategy to inform the public:

One Door Policy: NRA is the one authorized body to publish all information, and the information must be within the NRA policies and procedures.

Communication channels: Different medium of channels are used, and this medium differs according to the objectives of the communications:

- Broadcast, electronic, and print media
- social media
- Direct, person-to-person
- Direct, community meetings, and town halls
- Collateral (pamphlets and posters)
- Telephone information lines (live and automated)
- Third-Party validators and communicators

4.5 INGOs AND NGOs IN NEPAL

INGOs and NGOs actively participated in relief distribution and reconstruction in Nepal after the 2015 earthquake. However, INGOs and NGOs faced various challenges during the relief and reconstruction phases due to National Disaster Framework 2013. According to the framework, INGOs and NGOs had to work with Disaster Relief Committee (DDRC) and the village development committee in terms of prioritizing the relief distribution (Sanderson, Rodericks, Shresta, & Ramalingam, 2015).

NRA had set a guideline for the mobilization of INGOs and NGOs to prevent the duplicity in the victims' list and to ensure the fair distribution of resources. As per this rule, INGOs and NGOs must sign a tripartite agreement between NRA, INGOs and NGOs, and victims. INGOs and NGOs assistance must fall under the framework of the authority plan and standards. As for financial aid, INGOs and NGOs can only provide a grant of the NRS.3,00,000 and an additional NRS.50,000 for vulnerable groups, the same amount as the government, so that all the victims get the facilities equally. INGOs and NGOs can also provide masons training and aware victims in collaboration with the local government (B. Sharma, 2016).

At the end of each fiscal year, INGOs and NGOs would submit a report about the project plans, implementation, intervention, and result in the District Development Committee (DDC) and to the NRA. The reports would enable the NRA to monitor the INGOs and NGOs working in reconstruction and rehabilitation(GoN, 2016).

The 2015 earthquake was the biggest disaster the country had faced after the Earthquake of 1934. The event was something new for the country that the government was not prepared for, especially with human resources and funding. The international agencies, INGOs, and NGOs significantly contributed to rescuing, and relief work thorough out the country. However, the humanitarian aid was ineffective

as little money reached directly to the victims and more on the salaries of the employees. INGOs and NGOs were more focused on the areas with good road access and facilities, which ignored the largely marginalized group (K. Sharma, KC, Subedi, & Pokharel, 2018). Moreover, the country witnessed the operation of new hundreds of new INGOs after the earthquake without the knowledge of the government, making it difficult for the government to determine the funds and posing a threat to social harmony (Times, 2016b).

With all these issues, the authority temporarily banned the INGOs and NGOs from the reconstruction and prepared new guidelines for proper management. As per the guidelines, INGOs and NGOs must work under the supervision of the authority and must sign a tripartite agreement between NRA, NGOs, and victims, adopt a one-door policy and submit monthly progress reports by agencies identified by NRA. The guidelines also indicate that overhead and human resources management and mobilization expenses must not exceed 20 percent of the total project cost (Times, 2016a).

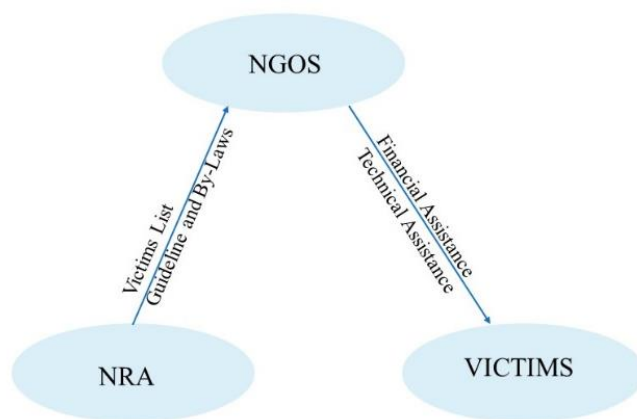


Figure 3: Tripartite Agreement between NRA, NGOs, and Victims(Source:Author)

The epicenter of the Earthquake was Barpak, a rural area, and affected more rural areas. Hence, most of the INGOs and NGOs were more interested in the reconstruction of rural areas than in urban areas. As the reconstruction in the urban areas was more complex and uncertain. Hence, the number of INGOs and NGOs working in the urban core of the Kathmandu valley was limited. Nepal Red Cross society, UN-Habitat, Homenet, Lumanti Support Group for Shelter, Oxfam are few INGOs and NGOs that worked in urban cores.

Table 2:INGOs and NGOs working in historical settlements of Kathmandu Valley, Source:(Daly, Ninglekhu, Hollenbach, Dwayne Barenstein, & Nguyen, 2017)

Settlements	I/NGOs
Harisiddhi	Lalitpur Society for Development
Machhegaun	Lumanti Support Group For Shelter and Oxfam
Siddhipur	Lumanti Support Group For Shelter
Thecho	Lumanti Support Group For Shelter Home Net Nepal

5. URBAN IMPACT OF EARTHQUAKE

The April-May 2015 earthquake epicenter was a rural area of Gorkha and the border of Dolakha and Sindhupalchowk outward Kathmandu Valley. Even though Kathmandu valley was outside the epicenter, it was among the three most affected districts in the country — 1,700 casualties, 13,000 injuries, and over 0.7 million collapsed buildings. According to damaged assessments by the NRA, the number of victims eligible for grants for destroyed and partially damaged houses was 104,614 and 7,086, respectively.

The Kathmandu valley had a massive impact, as half of the population of urban areas resides here. Four different types of buildings structure were affected in urban settlements, private housing, public and administrative buildings, religious and heritage sites, and commercial buildings. Among these typologies, private houses were affected most (Daly, Barenstein, et al., 2017). The private housing can be categorized into traditional houses in historical Newari settlements, modern housing in new and old settlements and informal settlements.

The earthquake had a massive impact on historical settlements. According to The International Institute for Environment and Development (IIED), 90% of houses in these settlements are semi-permanent constructed with brick and mud in load-bearing systems (Daly, Barenstein, et al., 2017). The majority of these houses' typologies were affected by the earthquake. In the traditional settlements such as Khokana and Sankhu, 80-90% of the houses were complete and partially damaged. Most of these houses had been constructed after the Earthquake of 1934, lacked maintenance. (*The Conference on the Preservation of Historic Settlements in the Kathmandu Valley*, 2017).

Despite the debris around the religious sites in these settlements, the locals continued their daily rituals and socio-religious traditions. Not only traditional load-bearing

structure but also new reinforced cement concrete (RCC) frame structure was also damaged in the city periphery. The RCC buildings collapsed due to illegal construction, changes in building use, and poor construction (*The Conference on the Preservation of Historic Settlements in the Kathmandu Valley, 2017*).



Figure 4:Kathmandu valley after Earthquake 2015

6. CONTEXT

6.1 INTRODUCTION: NEPAL

Nepal is a landlocked country situated in Southeast Asia sharing the border with India on the south, east, and west and China on North. It is a small country with an area of 1,47,181 sq. km and population of 26,464,504 ((CBS), 2013). The country was declared the Federal Democratic Republic of Nepal in 2008. The new constitution of the country divided the country into seven provinces giving administrative authorities to the local government. Nepal has diverse geography ranging from the high mountains to the flat plains. It is also home to people from 125 distinct ethnic groups and 123 different mother tongues, which result in a diversity of housing and livelihoods.

6.1.1 Area of study

Kathmandu valley is the center of the politics and economy of Nepal as the capital, Kathmandu, is in the valley. It is the most developed and populated area with 1.5 million people. The ethnic group, Newars, are the original inhabitants of the valley. The first settlements in the valley were founded 2000 years ago. Before the unification of the country by the Shah dynasty in the mid-eighteenth century, the valley was divided into four kingdoms Kathmandu, Lalitpur, Bhaktapur, and Kirtipur, all ruled by Malla kings. All these kingdoms have the same unique Newari urban pattern, art, and architecture, festivals, religious and socio-cultural aspects. The valley presents both Hindu and Buddhist architecture and culture from different dynasties. The three cities Kathmandu, Lalitpur, Bhaktapur, including its historical satellite settlements like Bungmati and Khokhana, are included in UNESCO's list of World Heritage Sites.

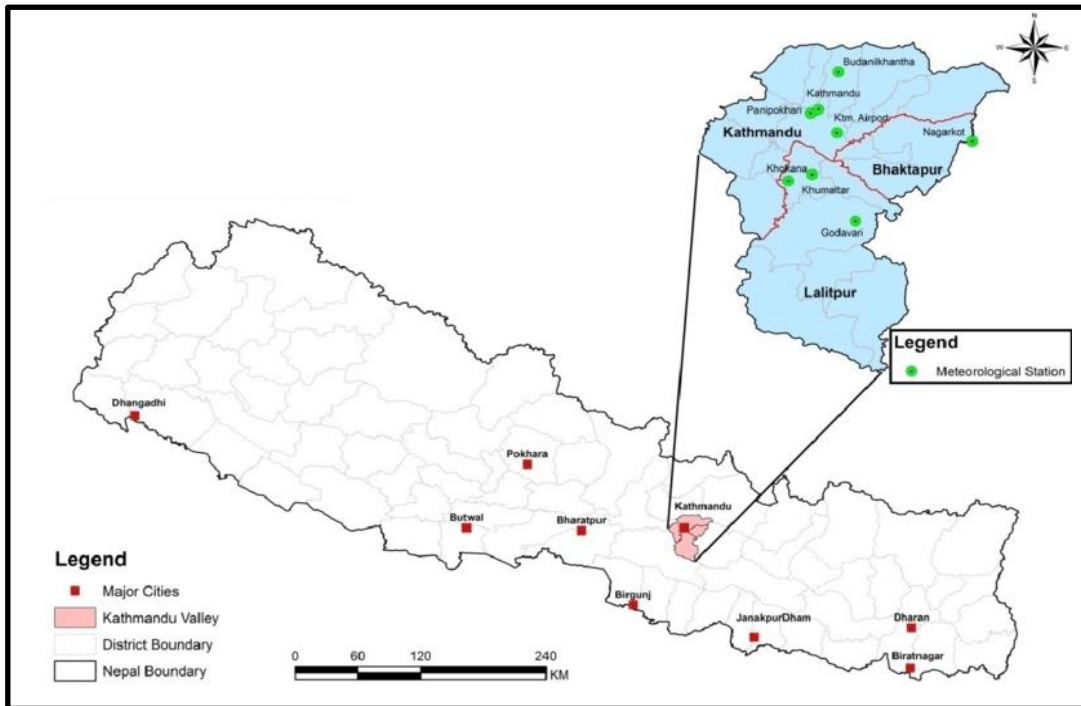


Figure 5:Map of Nepal(Source: Source: A Review of Green Roofs to Mitigate Urban Heat Island and Kathmandu Valley in Nepal)

6.2 CASE: INTRODUCTION

As explained in the justification of research, in the Introduction chapter, I have chosen Thecho one of the historical urban settlements in Kathmandu Valley as a case study site. Thecho is located in the southern part of Kathmandu valley. The settlement lies in Lalitpur District, Godawari Municipality, ward 12, and is only 6km away from the main Lalitpur town. Thecho is a seventh-century ancient settlement carrying the history of the different dynasties from the first Gopal dynasty to the Shah dynasty. The settlement is one of the 53 historical settlements within Kathmandu valley with

Newari cultural and traditional value, architecture, urban pattern, and intangible heritage and considered as the satellite town of Lalitpur.

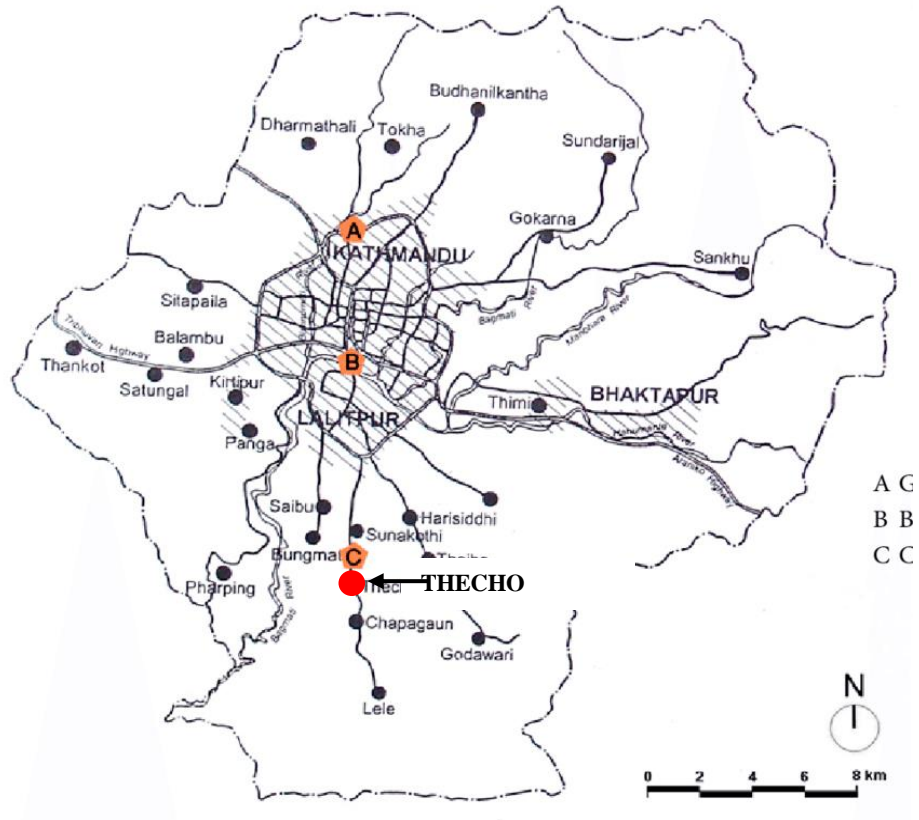


Figure 6: Map of Kathmandu Valley and Thecho (Meaning of public space and sense of community: The case of new neighbourhoods in the Kathmandu Valley)

1. Urban characteristics and identity

Thecho is a historical settlement with a typical dense Newari urban pattern. The settlement consists of the compacted small neighborhoods with small irregular streets, squares, entry gates, community buildings, and religious and cultural monuments (Chan, 2019). The urban pattern offers limited open spaces in the form of courtyards and square. In Thecho, streets are open to the two main square with significant religious and cultural monuments Balkumari, and Bramhayeni Temple. The settlement is built around these two temples maintaining the caste hierarchy with the high-class people living around the palace or temple and low caste at the periphery.



Figure 7:Map of Thecho

The settlement has two different types of built form —dense row housing facing the streets and courtyard. The houses have a rectangular plan with four and a half storeyed

as the house should not be taller than the main temple of the settlements. The plan of the house represents the social-cultural aspect of the Newari community with each floor for different functions — first floor for storage or workshop, second floor for bedrooms, third floor for living room, and fourth for kitchen. The Newari community has its unique architecture with the brick façade, slope roof, and wooden carved doors and windows.



Figure 9: Typical Newari House (Source: Toffine 1991)

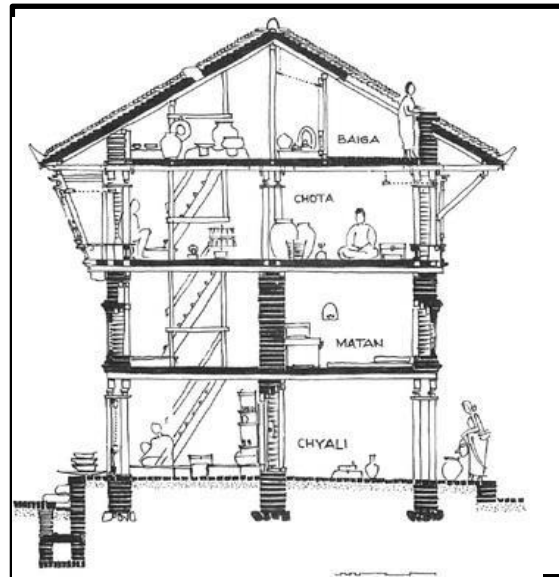


Figure 8: Traditional Newari House (Source: My Republica)

2. Socio-cultural aspects

Thecho has retained its original socio-cultural activities, which have been extinct in many other traditional Newari settlements in Kathmandu. The essence of the historical settlements is the socio-cultural aspect of the community, which is still prevalent in Thecho as people follow rituals and customs. The caste structure still exists there.

The Maharjan caste groups with the agricultural background are the majority, and Mali is the minority in the core area of Thecho. A majority of Maharjan, who is the local upper-caste, resides around two main Balkumari and Bramhayeni temples.

3. Family structure

Generally, Newari households are composed of the three generations, the joint family as the traditions of Newari society, which can also be witnessed in Thecho. However, with the change in time, there is an increasing trend of a nuclear family.

In Newari society, there are the traditions of dividing the property equally among the brothers, including their ancestral house. Hence, in the land ownership certificates, there are names of more than one.

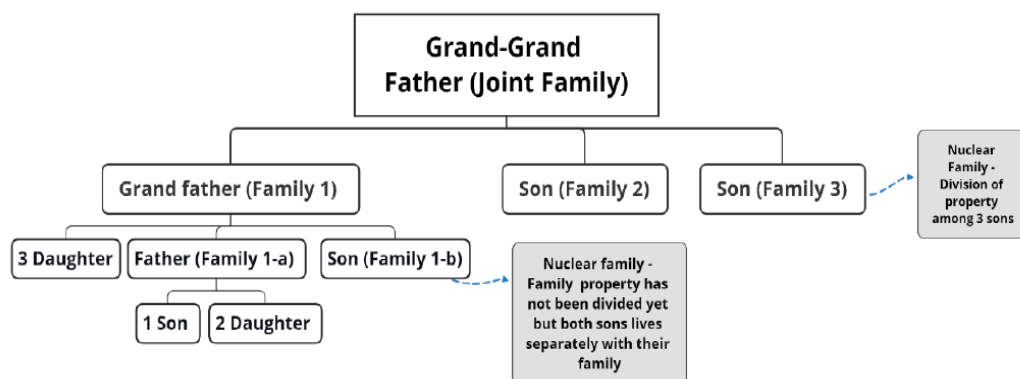


Figure 8: Family structure in Newari Community (Source: (Bhujel, 2018))

4. Religious aspects

The main festival of Thecho is Yomari Puni celebrated in December. During this time, the chariot of Balkumari, Bramhayeni, Ganesh, and Bhairab is carried around

the town. Along with these other prominent festivals such as Dashain, Tihar, Gai Jatra are also celebrated in Thecho. The traditional dances are performed on different occasions. Nawadurga Bhawani dance performed during Dashain is one of the famous traditional dances of Thecho. The festival of this town is also connected with another neighbor town such as Lele.

Guthi is a Newari organization integrated into the social structure of Newari society. Different types of *guthi* are formed for the smooth running of everyday activities as well as some special occasions. Some are related to different stages of life, such as birth, death, and others as a trust where the organizations use the revenue from donated land for community and in the tradition, culture, customs, and ritual of the ethnic group. Moreover, every Newari family is a member of more than one *guthi*. The different castes have different *guthi*. In Thecho, nine different types of *guthi* ensure the conservation of different tangible and intangible heritage and different family rituals and customs.

5. Economy

Thecho is a predominately agriculture-based community. Even today, the majority of the people are engaged in agriculture; however, with the change in time, few adopted new occupations such as animal husbandry, construction, services, and oil pressing. The town is famous for its mustard oil production. Its livelihood, socio-cultural activities, urban pattern, and intangible culture is related to the main occupation, which is agriculture.

6.3 SCENARIO AFTER THE EARTHQUAKE

The Earthquake of April and May had an immense impact on the Thecho. According to the report from the NRA, 544 houses were fully damaged, and 410 partially damaged, leaving thousands of people homeless. In the settlements, mostly old traditional houses were destroyed and damaged. These houses were typical Newari houses built with the load-bearing walls most of them built after the earthquake of 1934 and lacked maintenance.



Figure 9: Damaged caused by Earthquake 2015 in Thecho (Source: Rebuilding Settlements with Communities in Thecho and Machhengoan)

After the Earthquake, Thecho Women Savings and Credits and Cooperations was the first to provide emergency assistance to the community. Ward Nagarik Manch was responsible for the distribution of government emergency relief. A team of 9 leaders coordinated with Thecho Women Savings and Credits and Cooperations to distribute the initial relief to the victims. NGOs such as Lumanti, Red cross, Homenet Nepal,

and different local youth clubs also provided relief to the victims. These organizations distributed temporary shelter and food to needy families. Debris was one of the issues as it was not the priority for many victims, and clearing it was difficult due to the narrow street network. Most of the debris was removed before the reconstruction by individuals started.

GoN began the damaged assessments in Kathmandu valley in 2016 after rural areas and published the lists in the second half of 2016, a year and a half after the disaster. In the meantime, a few victims began reconstructing their house as living in the temporary settlements was difficult, especially in the winter.

Person A: "Living in a temporary settlement was not possible for us. As a Newar, there are various religious customs we have to perform throughout the year, and we have to invite people for feast 2-3 times a year. It was difficult to perform these customs and invite people in temporary settlements where a family of five people lived in a small space. We could not wait for more for the government to issue the grants and guidelines, and we were not sure when they would publish. So, we built our house before they published the list and grants."

6.4 CASE PRESENTATION

The case area is one of the few historical urban settlements in Nepal where two different agencies NRA and NGO Lumanti were involved in the reconstructions. This chapter focuses on the roles played by these two agencies to deal with the reconstruction process and different challenges in an urban context. Moreover, it presents a different approach used by NRA and NGO and discusses its impacts on the reconstruction process. The success rate of the houses rebuilt under the NGO was higher than the NRA.

6.4.1 NGO: LUMANTI SUPPORT GROUP FOR SHELTER

6.4.1.1 Introduction

Lumanti Support Group for Shelter was registered in 1994 as a non-governmental organization, focusing on the informal settlements and marginalized communities in Nepal to alleviate poverty. Lumanti encouraged community participation as the organization believes that the community should lead the project. Lumanti also promoted activities through community-led financial mechanisms. Hence they established savings and credit programs and cooperatives to reinforce the projects.

It primarily concentrates on housing as the organization believes the improvement in housing can improve socio-economic status. Other focus areas are community-based disaster management, economic empowerment, water & sanitation access, education programs, documentation and advocacy, research and surveys, and community participation.

1. Lumanti reconstruction program

After the earthquake, Lumanti cooperated with local government, community groups, and CBOs to provide aid in the reconstruction process. Lumanti, with help from various funding partners, had been providing financial and technical aid in different affected areas in both rural and urban areas.

With the support of the German donor MISEREOR, Lumanti implemented reconstruction projects in six affected areas, in Rasuwa, Makwanpur, and an old traditional settlements Chitlang, Thecho, Siddhipur, and Machhegoan. The main objective of this project was to provide technical and financial assistance to the affected

families and communities to plan and rebuild houses and infrastructure to create a safe and resilient community. The Lumanti reconstruction program included program approach and methodology, such as community-led approaches, capacity building, technical assistance, coordinating and partnership, and procurement of the construction materials.

2. Lumanti in Thecho

Lumanti Support Group for Shelter has been working in Thecho since 2005. The organization was involved in the Water and Sanitation Program by Water aid Nepal, programmed by an international organization in 2005. After that program, Lumanti helped establish the Thecho Women Savings and Credits and Cooperation. Women's cooperation has been providing loans for women to start new businesses and has been organizing various training for both men and women. Most of the people of Thecho are members of this organization. Lumanti and the Thecho Women Savings and Credits and Cooperation have collaborated for the construction of various infrastructures and women empowerment programs.

3. Lumanti in Thecho after the Earthquake

After the earthquake, the Lumanti worked with the women's cooperation in emergency relief and provided more than 137 temporary shelters to the most vulnerable groups of the community. After the relief, Lumanti supported the vulnerable groups with the reconstruction project. The Lumanti reconstruction project was approved in March 2016, targeting 150 families. On January 12, 2017, the Steering Committee of the NRA increased the housing reconstruction grants to NPRs.300,000 from NPRs.2,00,000. After this announcement, Lumanti also

increased grants but decreased the number of houses from 150 to 115 due to fund issues.

However, The project was delayed as NRA published the list of victims of the Kathmandu valley in September 2016. During this time, Luamanti started the study of Thecho to understand the post-disaster context. Lumanti, with Ward Nagarik Manch² and Thecho Women Savings and Credits and Cooperations, started workshops and meetings with the community and provided trainings. The reconstruction program aimed to support the destitute and vulnerable families, women-headed families, and families with older people and differently-abled. At the beginning of the project, many of these families were uninterested in signing the agreement with Lumanti as they lacked the confidence to construct houses. Besides, the families perceived that constructing a house under Lumanti would be more expensive than doing it through the NRA.

Thecho Women Savings and Credits and Cooperations shared their experience of convincing the victims to associated with Lumanti " It was not easy to convince these families to be part of the project because of the financial and technical issues. For many families constructing with the grant provided by Lumanti or NRA was impossible. The families did not have enough savings to build houses, and they thought getting money for reconstruction would be a difficult task. We encouraged the families to take loans, and financial and technical help form Lumanti. We also organized workshops to explain the project and the supports such as drawings, supervisions, documentation, and NRA registrations they would receive from organizations. In the workshop, they discuss the issues and concerns of the

² Government body in the ward before the local election was held

earthquake, and we assured them of providing all the possible help for the reconstruction. After the workshop, we got more applications for the reconstruction and had to increase the number of houses from 115 to 125, one of which was the model house."

6.4.1.2 Methodology

1. Survey

Lumanti began the survey before starting the community mapping and reconstruction process. With the help of a technical team, Lumanti prepared their victims of damaged and partially damaged houses. Lumanti submitted the list to the NRA and tallied the list with the list prepared by NRA before selecting the victims.

2. Community Mapping

Community mapping was a significant process as it facilitated with selections of victims, funding issues, technical and mason mobilizations, and paperwork approval from municipal(Shelter, 2018). Therefore, Lumanti used a community mapping workshop, a participatory approach to identify vulnerable groups and understand the issues related to land ownership, NRA policies, and bylaws. The workshop was attended by community members, local government bodies, and women cooperation.

The technical team used different scale maps, models, sketches, process diagrams, and graphical representation. The community, along with the technical team, created a mapping for the damage categories, land title status, and land parcel. The team organized focal group discussions after the mapping to discuss the issues, possible solutions, and recommendations(Shelter, 2018).



Figure 11: Mapping with the community (Source: Rebuilding Settlements with Communities in Thecho and Machhengoan)



Figure 10: Technical Team working on graphical interpretation of the problems (Source: Rebuilding Settlements with Communities in Thecho and Machhengoan)

The community participation in mapping and focal discussion disclosed the main issues of land parcel and land title in the old compact traditional settlements. Most of the houses were not eligible for the approval as per the guidelines of the NRA. After the workshop, Lumanti recognized the necessity of policy advocacy for these issues for the success of the reconstruction in such old traditional settlements (Shelter, 2018).



Figure 12: Mapping of damage categories(Left), land title status(Middle) and land Parcel(Right) (Source: Rebuilding Settlements with Communities in Thecho and Machhengoan)

6.4.1.3 Reconstruction in Thecho

1. Documentation

The reconstruction process required documentation such as land ownership, field book³, victim certificate, and NRA registration. The document should be submitted in the ward office, Municipality, and NRA. Lumanti provided documentation as it oversaw collecting all the documentation from each household and submit it to the concerned authority. Lumanti also established a community information center to provide information regarding reconstructions assisting victims associated both with Lumanti and NRA regarding documentation.

2. Landownership

According to the survey and mapping by Lumanti, 53% of houses were damaged entirely. Among these houses, only 41.28% had land titles, and 99% of the households had a land size smaller than 80SQ.FT. In many of the historical urban settlements, land size is an issue due to the practices of dividing the property, including ancestral houses, equally among the sons. The houses are divided vertically among brothers, which reductions the plot sizes. Moreover, according to the law, the minimum land size for building a house 538 SQ.FT. Hence, 99% of houses were not eligible to construct due to land site and land title.

GoN opened the registration of land for a short period; however, the time was not sufficient. Land registration in the core area is a complex social issue as it represents

³ Field book= a book in which a surveyor writes down measurements and other technical notes taken in the field

the division of household – solving family issues and applying for the registrations required more time. Further, land registration was an expensive and time-consuming process. Many low-income families could not afford the land registration and construction of the house at the same time.

Workshop and community mapping uncovered the gap between policies and reality in the field. The failure of national-level policy to understand the land complexity in historical urban settlements restrain about 99% of families from reconstructing in Thecho. The organization decided to discourse with the local government as they had a limited timeline for the project and could not wait for the intermediate level decision to address these issues. Hence, before starting the reconstruction process, Lumanti advocated for landownership and building bylaws of the settlement. (Shelter, 2018).

Thecho was a newly formed municipality when Lumanti introduced the reconstruction program. During this time, it was difficult to converse with the concerned department for a change in policies. In May 2017, after the local election, a new Mayor was elected. He was the from the community, and with his support, Lumanti held a meeting with the various socio-political groups, NRA and other concerned parties. After several meetings, there were changes in policies. Accordingly, families could reconstruct houses without the land ownership document based on field book and if the families could provide proof of living in that community for generations. These families received permission from the Municipality and technical and financial grants from the Lumanti. However, they would not receive the completion document from the NRA and government, which is essential to apply for a loan or other legal process; to receive the final document, the families had to provide the land ownership documents. Only 53 houses out of 125 are registered under NRA and received both documents from the NRA and government.

3. Technical Assistance

Lumanti provided the technical aid which included an architectural and structural drawing for free of cost and technical supervision and consultation. The technical team comprised of one architect, a civil engineer, and social mobilizer from the local community and some project coordinators. The technical team was always present on the field to supervise the reconstruction of the buildings. The professional architect and civil engineers from different countries such as Chile, Bangladesh, Brazil, India, Indonesia, and Spain also participated in the reconstruction.

4. Financial Assistance

Following the NRA rules, Lumanti provided the financial support of NRS.3,00,000 in three installments and an additional NRS.50,000 for low-income families. For most of the families, Lumanti followed the rules and provided the grants only after they passed the NRA supervision. Beside, Lumanti provided full grants for low-income family's incapable of waiting longer for the installment to complete the reconstruction.

Most of the families could not receive a soft loan from the government at 2% interest because of the tedious process and land ownership certificate. However, 50-60 households received a loan of NRS 4,00,000 from Thecho Women Savings and Credits and Cooperations at 11% interest. Lumanti also discussed with other commercial banks for low-interest rates; however, only a few families could receive the loans.

5. Building implementation capacity

Lumanti provided awareness and education about the earthquake and seismic resistant reconstructions to the community during the workshops. They also provided valuable information about the process and documentation. Lumanti, in collaboration with the Thecho Women Savings and Credits and Cooperations, provided one-day training for the mason where 30 masons participated. Masons received the seismic-resistant reconstruction training and the new building guidelines from the NRA.

Overall, Lumanti conducted its research before starting reconstructing, which enable them to identify different issues. Identifying these issues before was proved to be a strength, which solved not only the problem of the victims associated with them but also NRA. The continuous consultancy and guidance throughout the reconstruction helped victims to finish the reconstruction on time with a high satisfaction level.

6.4.2 NATIONAL RECONSTRUCTION AUTHORITY (NRA)

6.4.2.1 Introduction

NRA is a governmental body solely responsible for the reconstruction after the earthquake 2015 established by the GoN, which is still working. In this section, I have presented the role of NRA in the housing reconstruction of the historical urban settlement under the same topics as explained above in case Lumanti.

6.4.2.2 Reconstruction in Thecho

1. Documentation

The registration to get municipal and the NRA approval for the reconstruction was a tedious process as it required different types of documents. As per NRA, the time for the registrations process was 10-15 days; however, only a few households received the documentation on time. For most of the house, it took 2-6 months. Even though the registrations were under process, the households could still start reconstructions.

The documentations must go through different departments such as DLUPI and Grant Management and Local Infrastructure department to get registered for the grants. According to the NRA, the most frequent issues in this process is the technical issues delaying registration and grant distributions. Addressing the delay in the documentation, the CLPLU Lalitpur introduced a website where victims can monitor the documentation process.

2. Landownership

The land ownership issues in Thecho were one of the significant issues like in other historical urban settlements of Kathmandu Valley. Addressing this issue, in April

2017, the NRA in Thecho established the separate reconstruction committee collaborating with the local government to resolve the land ownership issues. The NRA provided temporary permits for the reconstruction process based on the field book. As per this, the house owner could receive the grants from the NRA but not the housing completion certificates.

3. Technical Assistance

In Thecho, NRA sent engineers after the earthquake for the damage assessments and preparing the victims' list through municipal and district officers (Daly et al, 2017). In the first three years, when the reconstruction was at its peak, Godawari municipality with 14 wards, including Thecho, had only four NRA engineers. These engineers worked both infield and office, so there was no regular follow up. Engineers only visited the sites for monitoring the reconstruction to issue the housing grants for the three tranches. In 2019 the NRA decided to increase the number of engineers in all the municipalities for better supervision.

According to NRA, the most common issues in reconstruction are the lintel and sill level band, structural security interventions introduced after the earthquake; many households did not take these seriously and built houses without it. In the absence of the lintel and sill level, the NRA asked households to demolish and reconstruct again or add retrofitting following the guidelines for the grant approval. Similarly, some victims constructed the houses without consulting structural engineers or trained masons. This type of non-engineering construction is another technical issue that creates problems for grants approval.

After almost five years, in November 2019, NRA also mobilized mobile masons for a door to door service to help the victims in construction. The responsibility of the

mobile mason was to educate other masons regarding the seismic-resistant reconstruction and to give advice to the victims.

4. Financial Assistance

In Thecho, 75% of the victims received the first installment as it did not require any documents regarding land ownership. However, the percentage of second and third installments gradually decreased as victims without the documents could not apply for the grant. Another reason is the delay in a permit for reconstruction from the Municipality. Also, most of the people did not proceed with reconstruction due to economic issues as reconstruction in the historical urban settlements expensive and due to social issues such as land ownership issues and family conflicts.

5. Building implementation capacity

NRA engineers and staff had a limited follow-up after they published the victim's list in 2016. NRA provided awareness about the earthquake and seismic resistant reconstruction to enhance the technical capability of the community. NRA collaborated with Oxfam, an international NGO confederation, to provide training to masons from different wards and different programs to enhance the local capacity of the community about technical issues. Besides, the NRA informed the community about the necessary documents required for the registrations.

6. Participation process

NRA used different mediums such as radio, newspapers, and television, to reach out to all the victims. As mentioned in the NRA framework, NRA has regularly used social media networks such as Facebook and NRA website where victims can receive all the information regarding the reconstruction procedure. Every ward is responsible for conveying the information regarding the change in policies or procedures through community meetings, pamphlets or posters, or persons to persons.

NRA: “Its been five years, and people still complain about not knowing anything; we have used local and social media, poster everything, but every time we get complaints, and we have either reopened or extended the deadlines. I do not know what to say about these facts. It shows how much people are ignorant and want to blame the government”.

Grant Management and Local Infrastructure department are responsible for the public hearing regarding the reconstruction process. However, there has not been any public hearing in Thecho in the last five years, as stated in the NRA guidelines.

Along with the mobile mason NRA also mobilized social mobilizers for a door to door service to collect information from the victims and the reasons for the delay in reconstruction. The social mobilizer in Thecho was from the same community, and along with collecting information, she also communicates and suggests the victims regarding the documentation, financial problems, and technical problems.

Overall, the guidelines provided by the NRA was not implemented correctly in the field. NRA lacked the capacity, resources, and proper guidelines that have affected the aid provided by them, such as public hearing, soft loans, and regular monitoring supervisors. This has not only delayed the reconstruction but also has made the victims uncertain about their roles in reconstruction.

7. FINDINGS

This chapter focuses on understanding the role of the NRA and Lumanti on the reconstruction of Thecho. The first section explains the perspective and the difficulties faced by the victims. The second section focuses on the challenges of owner-driven reconstruction in the urban context of Nepal.

Even after five years, the NRA was unsuccessful in completing the reconstruction in urban areas. The main factors for the failure are the assumption that *urban areas have access to all the facilities and information necessary. Focusing on and addressing the issues of the urban areas was not a priority during the first two years after the quake.* Another reason with a significant impact on the reconstruction rate in urban areas was the *blanket approaches* in the reconstruction, which provided the same level of aid in both rural and urban areas regardless of the context as all victims are equal for the government.

7.1 CHALLENGES IN THE RECONSTRUCTIONS

1. Documentation

According to the survey, 25% of the victims stated they had documentation issues. According to the rules of the NRA, the time for the documentations was 15-20 days. However, the situation in the field was different. According to the victims, it took more than three months for the documentations. Even Lumanti stated that it took more days than what the NRA had promised for the documentations. The issues emerged due to the centralized institutional bureaucracy for the reconstruction. NRA had difficulty coordinating with different governmental agencies.

Moreover, the victims complained about the insufficient number of staff and their uncooperative behavior in the office, which also affected the documentation process. In Thecho ward office, there was only one staff who was responsible for the reconstruction projects. She was responsible for both office and field, and victims had to wait for consultations. Besides, the notice on the notice board was also ambiguous. Whereas the victim associated with the Lumanti had no issues as Lumanti assisted in documentations. The volunteers from the Lumanti had collected the documents from each household and submitted it to the office.

Person B: *"It took 5-6 months for the documentations. I am not satisfied with the NRA. They only provided financial grants but no aid for documentation and technical issue. There were many documents that I was unaware of and found out every time I went to submit the documents. If I had a choice, I would choose Lumanti. I saw how they work as they have built many houses in my neighborhood. They informed their victims about the required documents and completed all the paper works. Whereas for me, I had to go to the office any time to submit different documents."*

2. Landownership

According to the survey, 57% of the population had land ownership issues, which was a significant barrier in the reconstruction of traditional settlements. Addressing the issues, the local authority and the NRA made changes in the land policy, expecting to enable more victims to reconstruction.

Even after the changes in the policies, not all the victims could take advantage of these policies. There were other land-related issues more complicated than land ownership. Multiple ownership, family conflicts, and boundary conflicts with a

neighbor are a few of the other land-related issues. For these reasons, some households had to withdraw their application from the Lumanti organization as Lumanti had a time constrain, and this matter would take years to resolve.

In many historic urban settlements, multiple ownership was an issue- due to the traditions of dividing the ancestral house equally among the sons. Before the earthquake, many families had been living in a joint family. However, after the earthquake, many families split up to build their own houses, which created the multi ownership issue. As for the multi ownership issues, it is a family conflict that needs to be solved by families.

Person C: "My family could not claim for the grants because of the multiple ownership issues. There are three owners' names in land certificates, my husband and his two brothers as we have not divided the property yet. Both the brothers have new houses, so while filling the victims' form, they both wrote that they have an alternative house. Since it has multi ownership, according to the NRA rules, victims having alternative housings are not eligible for grants. We tried a lot but could not get the grants. Even though we did not have money, we had to build a house since I was pregnant and living in temporary houses was not a good idea. So, with our little savings and loan from women cooperative and relatives, we built the house. We are still trying to get aid from the government to pay back our loan. For people like us, even NRS.3,00,000 can solve a problem. I appealed in the NRA and waiting for the answer."

The border dispute is another issue related to land ownership. According to the law, the house owners need to notify neighbors before the construction. A few interviewees stated boundary disputes with neighbors as the houses in historical urban settlements are attached housing, and 58% do not hold a land title. Moreover,

the NRA could not help in this issue as it is legal, and the house owner has to wait for the reconstruction until the court gives its final verdict.

3. Financial Assistance

Thecho is a poor urban community mostly dependent on agriculture, and families have minimal savings. Reconstruction for these families is burdensome; many could not build without taking loans or selling their lands as the financial aid provided by the NRA is insufficient to build a house in the urban settlements. Moreover, the NRA soft loan program of NRS.25,000,00 at 2 % was a failure as it was applied for a short period, and the commercial banks were hesitant to provide loans at a low rate, which disappointed many low-income families. The NRA has again announced loans at 5% interest; however, the victims are not positive about it.

According to the NRA report, only 31.5% of the houses have received the third installment. Moreover, 7.1% completed the reconstruction without claiming the last two installments or rejecting the grants to avoid the construction according to the NRA guidelines as seismic-resistant constructions are expensive.

Person D: " I am a farmer, and my land is the only source of income for me. Selling or applying for a loan on its basis, which I do not know when I can pay back, is not an option for me. Moreover, it is not easy to receive loans at less interest as we require many documents, and the process is tedious. But I need a house to live in I cannot live in a temporary house for the rest of my life. And the grant provided by the government is not enough. If I build according to the government, then I have to pay for documentation, drawings, and construct according to the bylaws and guidelines. This is too expensive for me. I do not want to build my house and die of hunger, so I decided to build myself, and I did build one for me. And, I do not need the building

completion certificate. I am not going to sell or take a loan, so why do I need it. All I know is that I need a house.”

According to my survey, until the end of February 2020, 55.3% of interviewees stated that they are waiting for the second and third installments. There are different issues, such as technical issues, documentation issues, architectural drawing, bylaws, and victims list for not receiving the installments.

Table 3: Reason for not receiving second and third installment form government(Source: Author)

Reasons for not receiving second and third installments **Percentage**

Technical issues	10%
Documentation issues	17.8%
Architectural Drawings	10%
Delisted from the victim's list	14%
Bylaws issues	3.5%

4. Technical issues

The people in Thecho were unsatisfied with the NRA technical assistance after the earthquake. NRA engineers were involved in the damage assessment and provided training one time to the mason as technical assistance; however, there has not been any regular follow up from the NRA engineers for quality check and technical issues after they published the victim's list. NRA only visited the field for the supervision to the approval of the grant. Moreover, NRA had not provided any free technical assistance from local mobilized technicians for retrofitting, as mentioned in its PDRF. After four and a half years, NRA provided free mobile mason; however, most of the victims were unaware of the mobile mason and their services. On the other hand, Lumanti was present on the field for the supervision and the equality check. The victims could quickly contact them in case of an emergency.

5. Participatory Process

i. Communication issues

In Thecho, the most critical issue was the communication gap between the NRA, the ward, and victims. Most of the victims I interviewed complained about not knowing the NRA engineers, information regarding the change in policies, and process for documentations. However, the NRA claimed that they have been using all kinds of media to inform the victims. According to them, the information has been posted in the ward office, social and local media.

Person E: "I built the house before the NRA published the guidelines for the reconstruction, so I could not claim for the grants. But recently the government opened the registrations for the grant to those houses which were built before. But we did not receive any kind of information at the beginning, so I could not register. I

only did when they opened it for the second time. I did not know where they gave the information. If they had given in the community, we would have known as our community is small, and people share every kind of information.”

ii. **Lack of Public Awareness**

Lack of public awareness was another issue for the delay in reconstructions as NRA assumes victims of urban areas were more educated and aware of the reconstructions. However, the reality on the field was different, as most people were unaware of the policies and procedures regarding the reconstruction. The advanced knowledge and the education level of the public were challenging in the reconstruction. Social mobilizer complained about NRA methods for conveying the news, along with launching the websites for details without researching how many have access to computers and the internet. According to social mobilizers, most people do not have access and are unaware of such websites and news.

Social mobilizers sharing her experience stated that if the NRA had mobilized door to door social mobilizers from the beginning, there would be an increase in the number of reconstructions. According to her, even after five years, some victims are unaware of the procedure and the victims' rights. This shows the ignorance of both sides, the NRA, and the victims.

7.2 IMPACT OF ODHR SCHEMES

GoN and NRA implemented ODHR for the post-disaster reconstructions to encourage the participatory model where victims organized the funds and labor for the reconstructions. ODHR was adopted after researching and witnessing its

accomplishment in different post-disaster reconstruction. However, the lack of understanding of the victim's socio-economic conditions, financial literacy training, and uncontrolled market fluctuations in the price of materials had an impact on the victim's livelihood. The ignorance in the adverse aspects of the ODHR has accelerated the problems of unsustainable indebtedness of individuals and the community (Reinhard SKINNER, 2017).

ODHR approach had provided confidence and a sense of ownership along with the burden of debts to many households. Limited subsidy grants of NRS.3,00,000 and high-interest rates loan for the ODHR has risen an alarming indebtedness in these urban areas. All families are taking loans to complete the house on time irrespective of the socio-economic conditions as only borrowing the money could help them to complete the reconstruction; indebtedness of the victims for years after the reconstruction is still a concern as most of the people are low-income depending on the agriculture, small business, and services.

Data indicates the victim borrowing the money from commercial banks at the rate of 12%-16%, Thecho women corporations at 11%, and from close relatives without any interest. Most of the victims are unsure of how long it will take to repay all the debts. According to my survey, about 80% of victims have borrowed money for reconstruction purposes. The debts have affected the living standard of many households, which have directly influenced mental health and education.

One of the victims shared her concern to repay her debt “I took a loan of NRS. One million forms Thecho women corporations and close relatives. Due to the land issues, we have not been able to receive grants from the NRA. If we had received the grants, it would have decreased the stress. Now my husband and I are working to pay back the loans, but the amount and interest for the loan are high, and we do not know how long we have work to clear the debt”.

7.3 SATISFACTION LEVEL

The primary focus was on the victims' satisfaction with the assistance provided by the NRA and NGO for reconstruction. The satisfaction among the victims who were associated with the NGO was higher than the NRA.

The majority of the victims associated with the NGO were satisfied with the aid. The victims appreciated the community participation, consultancy, and the guidelines throughout the reconstruction, whereas there was a mix of feedback from the NRA associated victims. Most of the victims criticized the NRA reconstruction procedure — delayed documentation and financial aid, no regular inspections, and communication strategies. However, both NRA and NGOs associated victims appreciated the effort to change the land ownership policies and bylaws in the settlement, which enabled most of them to rebuild.

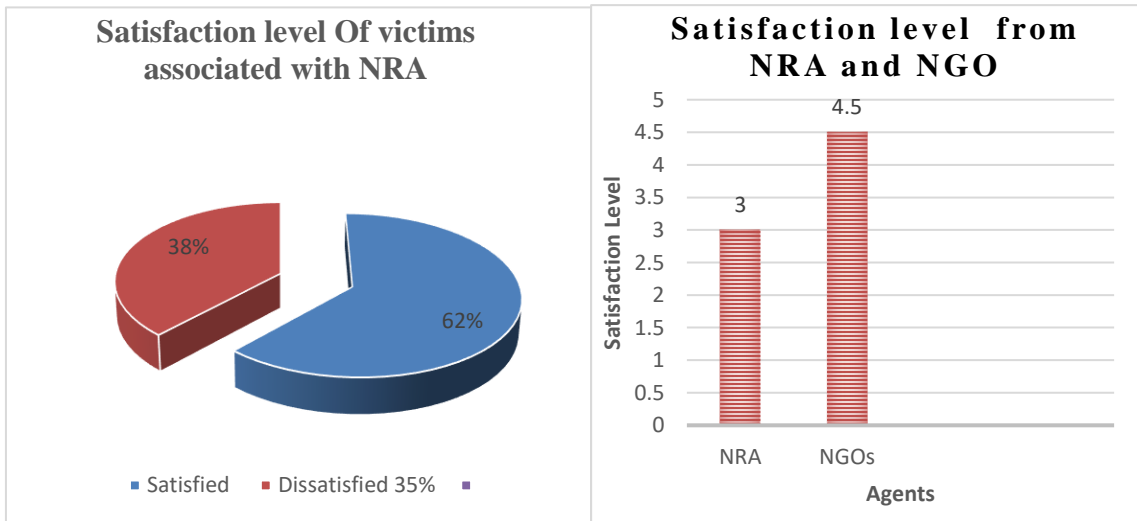


Figure 14: Satisfaction level of victims associated with NRA (Source: Author)

Figure 13: Satisfaction level from NRA and NGO (Source: Author)

8. DISCUSSION

According to the survey, in Thecho, only 189 houses out of 599 were rebuilt. 65% of 189 houses were constructed with a partnership with the NGOs Lumanti and remaining with NRA. The results after the five years of the earthquake indicate ineffective policies and a lack of technical and financial assistance in the traditional urban cores to encourage the reconstructions. It was also due to the NRA policies to concentrate more on the rural areas avoiding the urgency to reconstruct in an urban core in the first two years.

NRA adopted a blanket approach to operating the post-disaster reconstruction with similar policies, guidelines in both rural and urban areas. Further, their poor implementation contributed more obstruction in the reconstruction in the historical urban settlements. The policies, especially in historical urban settlements, determines the lack of contextual understanding and institutional knowledge. Similarly, the same approach in the financial assessment with an equal amount of aid of NRS,3,00,000 to all victims in both rural and urban areas without considering the context and expense is another major factor for the low number of reconstruction in the urban areas.

PDRF stated the importance of public participation and integrations of social and cultural assets in the reconstruction framework. However, in reality, the absence of a participatory and fundamental framework to understand the social, economic, and physical context at the local level has affected the reconstructions. The new bylaws in the traditional urban core have failed to respect and conserve the culture and traditions in historical settlements —new bylaws regarding the size plot, building height, spacing between buildings, a width of the streets and pattern and layout could destruct the century-old traditional pattern. This questions the governance structure for disaster

management— without any research on the ground when Nepal is a country of diversity with different religions, cultures, and geography that influences the housing.

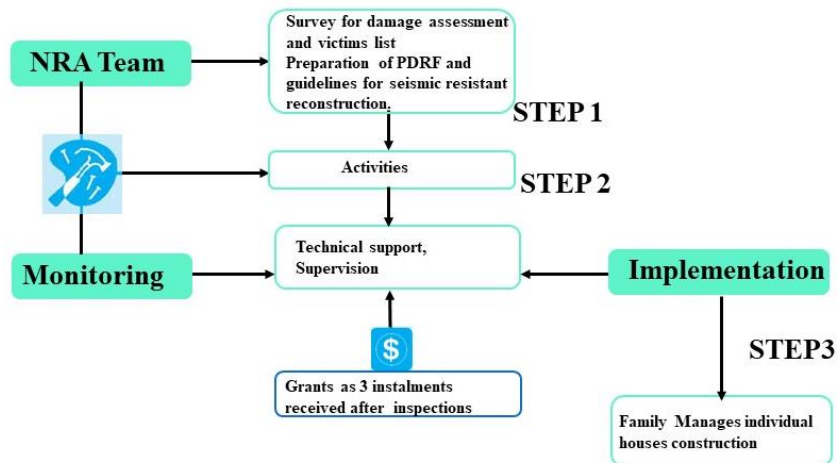


Figure 15:Reconstruction process in the field by NRA (Source:Author)

NRA lacks not only the policies but also the workforce. In March 2017, the formal CEO of NRA Govinda Pokharel stated the lack of human resources in terms of capacity, and its effect was evident in the reconstructions (Daly, Ninglekhu, Hollenbach, Duyne Barenstein, & Nguyen, 2017). It resulted in a delay in the victim's list and the first installment during the first two years. Besides, the NRA could not continue the regular follow-up after the survey. Moreover, NRA could not follow its guideline of providing a "mobile technical support team" in each ward with one engineer, a sub engineer, and social mobilizers for five years to assist and supervise the reconstructions.

After the five years, the reconstruction in the urban areas is still a bottleneck. For the last one and half-years, NRA employees have been focusing on the reconstruction of the urban areas. Having reinforced its human resources to deal with the issues NRA has added more engineers in each Municipality and mobilized social mobilizers and mobile masons in each ward to communicate and assist the victims.

Before reconstructions, Lumanti organized the workshops for the community member inviting national and international guests associated with post-disaster reconstructions. The main aim of these workshops was to highlight the importance of community involvement in rebuilding. Lumanti also provided training to 40 masons from the community on seismic-resistant reconstructions.

Human resources, which was limited in the NRA, was one of the strengths of Lumanti. Lumanti had the number of qualified staff, including technical and local community members who were engaged in different levels of reconstructions work. The technical teams with one architect, civil engineers, and social mobilizers in the field to monitor the technical aspect as well as to assist quality control for completing the reconstruction. Hence, the Lumanti framework to understand reconstruction through the victim's perspectives and ground-level study helped them to achieve success.

9. CONCLUSION AND RECOMMENDATION

9.1 CONCLUSION

The research explains the complexity and uncertainty in the post-disaster reconstruction of the historic urban settlements. The study indicates the urgent need to change inadequately formulated policies in the urban context and the role of the different stakeholders of reconstruction.

The Owner-Driven Housing Reconstruction approach is based on the empirical theory, where it shows that the houses reconstructed after the disaster by the owner with the financial and technical help from the agency respond to the needs of the victims (Barenstein & Leemann, 2012). ODHR approach requires the combination of coherent policies and understanding of ground-level understanding of the needs and issues for the success of the reconstruction. However, the research in the case study area indicates the lack of the NRA's institutional knowledge and experience in the urban areas, which has hindered the reconstruction progress even after five years of disaster.

On the other hand, Lumanti, as an independent NGO, based their reconstruction strategies on studying the situation of the ground and focused on the victim's issues and needs leading them to build 125 houses on a given timeframe. Hence, the working strategies of Lumanti — focusing on demand generated from a bottom-up approach rather than the supply from top-down irrespective of their needs, suggests significances of the understanding context to prepare policies and guidelines for the successful implementation of the ODHR.

9.2 RECOMMENDATION

The findings in the research led to several recommendations that can help to accelerate the reconstruction in the historic urban settlement and support the owners for better results.

1. In the case of historical urban settlements, NRA lacks the contextual understandings and local participation in disaster governance. NRA should study these areas and change governance structure accordingly, as it will be challenging to achieve success in the reconstruction without any changes in the policies and guidelines.
2. The NRA has been criticized for its intricate and tedious bureaucracy process from the beginning of the reconstruction. Even after the five years, NRA has not changed much and is also one of the issues for slow reconstructions. NRA should simplify the process.
3. Most of the owners have borrowed money for the reconstruction, which has affected the living standard and increased mental stress. Hence, the authority should address the indebtedness by implementing mandatory financial literacy training, which was also recommended by UN-Habitat in Sri Lanka for ODHR. Financial literacy is making victims knowledgeable on the use of grants, saving, purchasing, and investing throughout the construction process. Also, the NRA should simplify the process for applying for soft loans and pay attention to the uncontrolled market fluctuations.
4. NRA should educate victims on ways of reducing the additional costs of reconstruction and allowing the construction with room for expansion in the future for sustainable construction.
5. Even after the five years, ineffective communication between the NRA and victims is a significant issue. NRA should focus more on understanding the communities

before adopting communication methods like launching a website for information when most of the victims do not have an idea of using websites. The NRA should increase the number of human resources for awareness and communication sector in the ward office and provide toll-free phone numbers for queries and information. Besides, it should also increase the number of social mobilizers for the door to door service for better results.

6. Independent NGOs should conduct Post-disaster reconstruction. These seem to have a much better understanding of the situation on the ground, and therefore more appropriately address and implement interventions in line with the local needs.

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11. APPENDIX

APPENDIX 1: QUESTIONNAIRE SURVEY SHEET

Full Name..... Age..... Sex..... House no.....

1. Family structure and socio-economic condition

(a) Place of Origin: (b) Year of living in this locality:

1.1. Your family structure (Total number)

(a) Nuclear (b) Joint

1.3. Your family total income and their sources

Monthly i. < 12,000 ii. 12,000 – 25,000 iii. 25,000 – 75,000 iv. >75,000

Sources i. Agriculture..... ii. Rent iii. Services iv. Other.....

2. Earthquake related

2.1. How old (approx.) is your house?

(a) 0-15 yr (b) 16-30 yr (c) 31-50 yr (d) >50 yr

2.2. Physical damage in your house was

(a) complete damage (b) roof and stair damage (c) wall crack (d) other

2.3. Have you renovated after earthquake?

(a) yes (b) no (c) other

2.4. Where did you get support for reconstruction?

(a) NRA (b) NGO

2.5. How long did you live in temporary settlement?

(a) 6months (b) 6months-1 year (c) 1-2years (d) More

2.6. How long did it take to rebuild your house?

(a) 1.5years (b) 2 years (c) 3years (d) More

2.7. When did you rebuild your new house?

(a) Immediately after (b) After a year (c) After 2 years (d) More

2.8. Why did it took long time for reconstruction?

(a) Ownership certificate Issue (b) Multiple ownership issue (c) Border dispute
(d) More

2.7. What is your financial sources for reconstruction?

(a) own fund (b) Loan from relatives (c) Loan from Bank (d) other

3. Incentives required

3.1. Have you received incentives provided by government for earthquake victims?

(a) yes (b) no (c) other

4.2. What do you think about government of Nepal's grant support of Nrs. 3 00, 000 to earthquake victims?

(a) sufficient (b) not sufficient (c) other

4.3. What type of incentive do you need for reconstruction in post-earthquake period?

(a) financial/cash (b) technical support (c) other

3. Documentation

3.1. Do you have landownership certificate?

(a) yes (b) no

3.2. How was documentation process?

(a) Easy (b) Difficult

3.3. How long did it take for documentation process?

(a) 15 days (b) 1-6months (c) More

4.Satisfaction level

NRA : 1 2 3 4 5

NGO : 1 2 3 4 5

5. How was the assistance?

NRA : (a) Good (b) Average (c) Bad

NGO : (a) Good (b) Average (c) Bad

6.NGO

6.1. How was the workshop and community participation?

(a) Good (b) Average (c) Bad

APPENDIX 2: INTERVIEW GUIDE FOR NGO

1. How and why did you decide on working in these settlements?
2. What was your role in the reconstruction?
3. What were the challenges and opportunities you face when trying to set up in historical urban settlements?
4. How did you mobilize the community?
5. What was your central concept for the reconstruction?

6. How did you deal with land issues and housing?
7. Was the community involved in the reconstruction phases? How were they involved? How important was their role in the reconstruction?
8. Did your NGOs provide any technical training?
9. What types of specialized attention and support were provided to vulnerable groups? (orphans, widows, the elderly, and the very poor).
10. How did you incorporate the social and cultural aspects of the community?
11. What is your opinion about the guidelines provided by the government?
12. How difficult was it to co-ordinate with the NRA and work within its guidelines?

INTERVIEW GUIDE FOR NRA

1. What is the current state of the reconstruction in historical urban settlements in Kathmandu Valley?
2. What are the reasons for the delay in the reconstruction?
3. How challenging is working in historical urban settlements than in other urban areas?
4. How successful is the ODHR in the historical urban settlements context?
5. Current views on the NGO toward the reconstruction?
6. What are the main issues for reconstruction?
7. How are the NRA addressing the issues in the reconstruction?

