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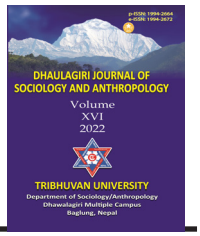

Inequality in Post Earthquake Reconstruction: An Ethnographic Account of a Peri-urban Locality in the Northern Part of Kathmandu

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Kumar Prasad Aryal

Abstract

Scholars have carried out studies on different dimensions of the 2015 earthquakes. However, inequality in reconstruction has not been understood sufficiently in the context of Nepal. Taking this issue into consideration, this paper explores the issues of inequality in the reconstruction of private houses of different classes and caste/ethnic groups during the recovery from the earthquake. Based on this context study focuses on the behavioral and organizational response approach to disaster to handle the reconstruction process. This research was conducted in Dharmasthali of Kathmandu district in April 2016. The study adopted an ethnographic approach based on both primary and secondary sources. Data was collected through participant observation, in-depth interviews, key informant interviews, and informal discussions with earthquake victims, and representatives of government officials and different community-based organizations. Immediately after the earthquake, victims built temporary shelters either on their own or with support from state and non-state actors. The temporary shelters built by the people revealed the unequal capacity of the victims for reconstruction and also existing social inequality. The study shows that the poorer sections of the community bear the significant impact of disasters like earthquakes. Those with access to resources can construct their homes easily, but the poor face significant challenges in reconstruction. The study concludes that during disasters there is a need for government assistance to be generous and rules to be sufficiently flexible to enable the poorer victims to reconstruct their homes and lives.

Keywords: caste, class, earthquake, municipality, reconstruction, victims

Introduction

Nepal is ranked as the 11th most at-risk country in the world in terms of seismic hazard (MoHA, 2016). Historically, Nepal has suffered many destructive earthquakes. Out of them, the Gorkha earthquake of 7.8 Richter on 25th April 2015 and its big aftershocks caused huge losses and damages, including human casualties in which Kathmandu district is one of the highly affected districts. Amnesty International (2015) reported that the northwest areas of Kathmandu were most affected, where large numbers of buildings crumbled and displaced thousands of residents.

A disaster such as an earthquake brings about change(s) in the ecosystem, physical environment, and cultural phenomena of the society they take place (Hoffman & Oliver-Smith, 1999). As such, an earthquake is a part of a natural disaster, which changes the physical environment and socio-cultural phenomena of the society where it occurs. Oliver-Smith (1999) in that context clarified that disaster perhaps not equally totalizing to all parts of an affected society and that the degree of vulnerability of a population depends on, e.g., social, political, and economic factors as well as the physical exposure to the source, or agent, of the disaster. It means the nature and degree of the damage are determined by the socio-economic vulnerability of the victims in addition to the response of the outside agents during the rescue and reconstruction phase.

Reconstruction of permanent houses is one of the challenging issues in the aftermath of the earthquake. Earlier studies have shown that economic class, religion, beliefs, and local politics related to gender and socio-

Email: aryalkumar1@gmail.com https://orcid.org/0000-0002-0131-4517

political status prevailing within the society play vital role in the recovery of the disaster victims (Gamburd, 2013), which is possible to understand only through the interaction with victims through ethnographic study (Oliver-Smith & Hoffman, 2001). It is also necessary to understand how affected people, communities, local authorities, and national governments can respond to this disaster (Young, 2015); and how these groups coped in the aftermath of the earthquake and are preparing themselves for any potential disaster of such a scale in the future.

People's needs and aspirations for a better post-disaster future will vary based on the socio-economic context of the community. In the context of Nepal, caste/ethnicity are markers of social hierarchy and can determine socio-economic status as well. The earthquake affected the people indiscriminately, however, experiences of disasters, resilience, and vulnerability are varied by sex, social class, and ethnicity (Khattri, 2021). Another study shows that Brahmins, Newars, and Chhetris possess higher resilience capacity and had a higher level of recovery rates whereas poor families in all social groups show less reconstruction than the households falling under the middle and rich economic category (Tamang et al., 2000). It was found that previous studies have categorized the class structure based on caste/ethnicity but have not analyzed the class within particular ethnic groups. In this study, inequality in reconstruction has been analyzed based on access to higher socio-economic resources within particular caste/ethnic groups (especially the Newar ethnic group) rather than caste/ethnicity.

Moreover, the process of housing grant distribution and delay in the distribution of reconstruction grants is another problem. The government deadlines to take a grant further created a problem that the majority of the house owners were more focused on rebuilding according to government directives and less concerned about constructing houses that fit with their lifestyle and identity to secure the grant (Rawal et al., 2021).

Thus, these factors should be taken into consideration before applying any plan and programs to be more effective and efficient to generate information on policy implications for reconstruction. Oliver-Smith (1996) in this context conceptualized three approaches to disaster study: i) a behavioral and organizational response approach; ii) a social change approach, and iii) a political-economic/environmental approach focusing on historical structural dimensions of vulnerability to disaster. Through the Nepal Reconstruction Authority (NRA) followed the classic behavioral and organizational response approach, this study is based on the approach of disaster study and makes a case for attention to the politics for the formulation of plans and policies to handle the recovery process of disaster.

This paper explores the issues of inequality in the reconstruction of private houses of different classes and caste/ethnic groups during the recovery process of the earthquake and explores the difficulties and challenges facing these people during the reconstruction process. The study will help understand the experiences, challenges, and resilient practices of the communities affected by the earthquake in the reconstruction process. Furthermore, the study analyzes resilience practices of different classes and caste/ethnicity of the people living in the peri-urban area. Based on that context this study was conducted in Dharmasthali of Tarakeshwor Municipality, which is a highly earthquake-affected area, located in the northwest part of the central part of Kathmandu.

Materials and Methods

Site description

Dharmasthali, a traditional Newar-dominant settlement that represents the peri-urban area of Kathmandu District, was selected for the study. According to the records of Tarakeshwor Municipality, 623 households belong to Newars (67.5 percent), Brahmin/Chhetri (30.4 percent), hill Dalits (i.e., Sunar and Pariyar) (1.14 percent) and the rest (0.96 percent) belongs to ethnic group Tamang/Magar. The Newars were the major ethnic group in that area. They have their caste hierarchy called high-caste Newars and low-caste Newars. Among the Newar ethnic group in that area Shrestha, Dangol, Maharjan, Bindukar belongs to high-caste Newar, and Khadgi/Shahi, Kapali, Nakarmi, Manandhar, Napit are low-caste Newars, so-called impure but touchable caste (Gellner, 1999).

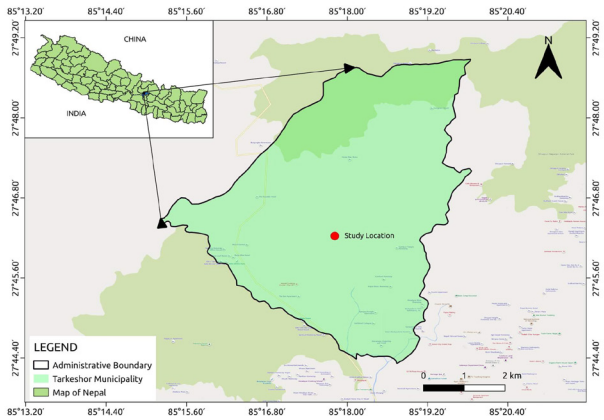

Figure 1: Map of Tarakeshwor Municipality

Before the earthquake majority of the structures were Mud bricks/stone with mud mortar base (56.93%) (CBS, 2011). Newars lived in the core Bazar area and hill Dalits and Brahmin/Chhetri lived in the periphery of that core settlement. The houses in the core Bazar area were three to four storeys tall, built in one to two aana (342.25 sq. ft. to 684.50 sq. ft.) of land, tall structures in a relatively small plinth area combined with mud-mortar that made particularly vulnerable to earthquakes. More than 75 percent of the housing structure was fully damaged

and none of the partially damaged houses were in good condition for living in without maintenance. The detailed nature of earthquake-affected households based on caste/ethnicity has been shown in Table 1 below.

Table 1: Caste Composition of Earthquake-Affected Households in Dharmasthali

S. N.	Ethnic group	Total house-hold	Fully dam-aged	Partially damage
1.	Brahmin/Chhetri	190	148	42
2.	High-Caste Newars	350	259	91
3.	Low-Caste Newars	71	64	7
4.	Hill Dalits	9	8	1
5.	Tamang/Magar	3	3	-
	Total	623	482	141

Source: Field Survey, 2016

Figure 2: Housing Structure of Dharmasthali before the Earthquake (Source: Uttam Shahi)

Data Collection Method

This study adopted an ethnographic approach based on both primary and secondary sources. The research was carried out in April 2016, one year after the earthquake. During that time author regularly spent three months at the study site. Furthermore, frequent field visits at regular intervals after the completion of the field work helped to update changing scenario of the community.

Primary data was collected through participant observation to observe and understand the community as it went through the ordeal of coping with the consequences of the quake. The earthquake-affected households were categorized into different four groups (Table 2), based on the nature of the damage and the situation of housing reconstruction. Based on that categorization, 19 households were selected purposively for in-depth interviews to represent all class and caste groups to cover the overall scenario of the community. The study only considered Newar and hill caste/ethnic groups.

Both qualitative and quantitative data were collected from selected households. For understanding the socio-economic condition of sampled households, demographic information, ownership of lands, source of income and expenditure were collected. Key informant interviews were conducted with representatives of the local government, community-based organizations, school teachers and local people for gathering information about strategies to cope with a difficult situation and the rehabilitation process. Similarly, informal group discussions were conducted in a public place to collect information about people's experiences with the reconstruction process and their coping mechanisms. Secondary data was collected through government publications, municipality records, journal articles, and other related publications that focused on the aftermath of the earthquake.

Collected data were analyzed in three stages. First, data was reproduced in a tabulated form for qualitative and quantitative data analysis. This process defines each item clearly that reduced the data into concrete form. Second, collected data from sample households were categorized, wherever they fit to create the thematic headings. Then in the third stage, the data was further generalized by interpretation of the finding and presented in a readable format to conclude.

Moreover, Kuppuswamy scale was used to stratify the class status of sample households. In this scale, education status and occupation along with the monthly income of the family determined socio-economic ranking of sampled

Table 2: Categorization of Sample Household for In-depth Interview Based on Caste/Ethnicity and Nature of Impact

S.N.	Categorization of sample household	High-Caste Newars	Low-Caste Newars	Brahmin/ Chhetri	Hill Dalits	Total
1.	Houses completely destroyed and currently living in the same place	2	3	3	2	10
2.	Houses completely destroyed and currently not living the original place	2	-	2	-	4
3.	Houses completely destroyed with human casualties	1	1	-	-	2
4.	Houses partially damaged	1	-	1	1	3
	Total	6	4	6	3	19

households as high, middle, and low economic status (Singh et al., 2017). Based on the analysis it was found that all low-caste Newars and hill Dalits fall under poor category, whereas high-caste Newars and Brahmin/Chettri belong to rich category.

Results and Discussion

General scenario on Temporary Shelter to Permanent Structure

During the field visit, it was observed that all households had sheltered in temporary tents/camps after the earthquake. Interviewees reported that people moved to temporary shelters for about two months period, which were constructed either alone or with full or partial support from others. The process of reconstruction action is determined by the socio-economic and geological/ ecological settings of the affected people (Khattri, 2021). Rich people, mostly from high-caste Newars and Brahmin/ Chettri groups, started building temporary shelters with their resources. The households with higher incomes and secure employment were more resilient as opposed to poor households (Bolin & Stanford, 2006). The rich households spent about NPR 300,000 to 1.5 million for temporary shelter. But poor people started constructing shelters by utilizing salvaged materials from their damaged houses.

Mr. Khadgi, a low-caste Newar with a three-storey house built in one *aana* (342.25 sq. ft) land was a representative character of a low-class economic family. His house was destroyed in the earthquake. He shared it was financially difficult for him to construct a new shelter for his five members family. He made a temporary shelter using financial support from the government [NPR 25,000] and non-governmental organizations [NPR 7500] and utilizing zinc and wood from his destroyed house. Further another non-governmental organization made a temporary shelter (*Gol Ghar*) for his family. During the field study, his family still lived in a temporary shelter. He was not sure how long his family will have to live in that temporary shelter because he did not have enough money to construct a permanent shelter.

After the house of one hill Dalit's (i.e., Pariyar) was destroyed, he made a temporary shelter on Brahmin's land because of a lack of alternative land for construction. But later the landowner forced them to leave his land so, later they cleared their own land of the destroyed house and shifted to a temporary shelter built there. By utilizing state and non-state organization's supportive funds and utilizing the materials from demolished damaged houses they constructed two rooms where they managed everything like the kitchen, dining, bedroom, storage, and so on. His income is not sufficient and has no land that can be sold. Hence, they worried and thinking that their family life will be spent in the temporary shelter.

Types of Temporary Shelter

During the period of field study, it was observed that three different types of temporary shelters were found in the study area. The first one was called Tunnel house (*Gol Ghar*), out of corrugated sheets formed in an inverted U shape, having one room of 10*10 sq. feet. It was built with the support of non-governmental organizations (i.e., Rotary Club, Grace Nepal, and Art of living, coordinated by Rotary Community Club, Dharmasthali). One bundle of Zinc, and four pieces of iron pipe (having ½" thick) was necessary for the construction of that type of structure. Donor made the frame of the structure and the victim gave proper shape to it by themselves by constructing the temporary walls on either side of the structure. This showed that state and local-level organizations when properly utilized during emergencies and disaster response can be instrumental in social protection (Bolin & Stanford, 2006).

The second category of shelter was those solely built by an individual family, using materials from their destroyed house such as bricks, wood, and corrugated zinc sheets. This temporary shelter was larger than the first one. The third shelter was a modern concrete and brick house with metal door/window frames and a zinc roof. This house was also solely built by families, who were financially capable of constructing a temporary house but had not planned to build a permanent structure immediately.

The space inside the first type of shelter constructed with the support of donor agencies was not sufficient for the families living there. Later, most of the victims constructed the second category of shelter and adjust both of these shelters after a year. During the time of the study, the author also stayed in that temporary shelter (*Gol Ghar*). During the monsoon, they constantly lived in fear of different insects and snakes. Water leakage from the joints of zinc sheets added further problems. The author also witnessed those problems. The shelter was too cold

Temporary shelter-*Goal Ghar*

Shed constructed by utilizing materials of their destroyed house

Modern truss

Figure 3: Types of Temporary Shelter Constructed after Earthquake

in winter and too hot in summer. Despite these problems, the families had to live in the shelter as they had no other options. Normal life was badly disrupted due to storms, monsoon rains, and winter cold inside the temporary shelters (Tamang et. al., 2020).

Reconstruction of the permanent structure was essential for earthquake victims and those who had lost their houses. It was observed that building a new house was not possible for those with poor economic conditions. At this difficult time, a temporary shelter was helpful for them. However, they also faced many problems in those shelters but had to adjust to that. In the case of a resourceful family reconstructing a shelter was not difficult for them. During that time labor scarcity and scarcity of raw material for reconstruction was one of the great challenges. Some family built their shelter despite the shortage of materials and labor. A son of the Brahmin family returned from South Korea just three months after the earthquake and started to construct a modern truss structure for the family. At that time, there was a scarcity of construction labor, so he imported labor from Tarai. By consulting with engineers, he built a concrete wall truss with a wooden door, aluminum windows, and fiber roof, at a cost NPR 1.5 million. Other financially capable people in the neighborhood were also found to consult with him for building similar types of truss houses. It shows that as part of a longer-term social process, a disaster unfolds within pre-existing social inequalities and affects different social groups differently (Gamburd, 2013).

Problem of Reconstruction

Different plans and programs were adopted by the government to support families affected by the earthquake in the reconstruction process. However, these plans and programs neglected the traditional practices, people's status, livelihood pattern, community's settlement pattern, etc. in many cases. It has been emphasized that post-disaster recovery activities that neglect the livelihood patterns of the affected community are the biggest challenge in most situations (Kulatunga, 2010). The fact that the plans and programs during the reconstruction process do not always have a positive impact on the community, has been analyzed next.

Insufficient Government Grant for House Reconstruction

Reconstruction is quite an expensive affair, but the government support fund was not sufficient to construct a new one. To support private-house reconstruction, the government decided to provide NPR 300,000 and 100,000 for completely and partially damaged houses respectively (NRA, 2016). The house reconstruction grant was provided to the victim on an installment basis through the banking system. It was found that there have been several issues with the plan and procedure of the fund distribution process. According to the NRA guidelines, a household initially received the first NPR 50,000 for reconstruction. With this money, it was mandatory to complete the construction of the foundation level (DPC level), only then the second installment of NPR 150,000 rupees would be provided. Finally, the family receives the remaining NPR 100,000 after completing the construction of the house. However, research participantts who had successfully rebuilt their houses following the building code reported that construction of their houses cost them about NPR 3,000,000 at minimum. It can be interpreted that the government is not the driving force of reconstruction despite what the government claims.

Another related issue with the insufficient grant provided by the government was the lack of land ownership to build new houses, especially when the victims had built their temporary shelter on the only piece of land they own. The first installment of the government fund was not sufficient for the building approval process of the municipality, which was mandatory for house construction. Those who did not have alternative land had constructed their temporary shelter in the land where they plan to construct a permanent structure and needed to remove their temporary shelter from there. They argued that when the amount will be spent on temporary shelter adjustment, then how should they complete the ground-level construction work from that first installment? It was the major question raised by the poor who were not able to construct their permanent settlement in their way. They were in the favor of providing the entire supportive amount at one time. That type of people belongs to hill Dalits and low-caste Newars group.

A local school teacher suggested distributing the government's reconstruction support fund at one time by forming a committee, comprising 10 to 15 people with the involvement of the local government. He argued that the clause of distributing the fund among the group was to make them accountable for the individual fund. He believed that all are bound by social status and prestige because they easily face the punishment of the government but difficult to face social punishment which is the strength of the group that supports to use the fund in housing reconstruction.

In the context of our country, community-based management systems such as community forest management systems, community-based irrigation systems, local-level saving groups, etc. have succeeded in many cases. So it could be argued that the distribution of the reconstruction fund through the formation of the group in the community is also one of the alternatives for a fast recovery and rehabilitation process. It would also make transparent the decisions that communities make about the natural environment in the context of their political environment, economic pressure, and societal regulations (Robbins, 2004) rather than a central-level decision.

Those who had their ancestral property but were not financially capable were planning to construct the house by selling that land. People belonging to high-caste

Newars and Brahmin/Chhetri caste groups represented this type of category. But hill Dalits and low-caste Newars groups did not have their land to sell and they did not have any alternative other than to wait and see the government's decision for a reconstruction grant. The NRA decision to provide additional support to displaced, landless, and vulnerable people (Tamang et al., 2020) was a positive part of the better recovery. But in that research site, they were unaware of this decision.

It was found that high-caste Newars and Brahmin/ Chhetri people who were wealthy consulted with engineers for the construction of earthquake-resistant houses. They preferred to construct reinforced cement concrete (RCC) houses. After the earthquake, it had been found that RCC houses became more prevalent in the urban site, as they believed that RCC houses were more earthquake-resistant (Limbu et al,., 2019). Mr. Baniya, who sold his ancestral land to build his new house and regularly consulted with engineers explained changes and additional costs in following the building code of the municipality:

> …. these newly constructed houses were 20% extra costly in the sense of the material than those houses which were constructed before the earthquake. For example, the size of the pillar of a house had increased from 12 inch *9 inch, to be at least 12 inch *12 inch and the single tie-beam system in the DPC level was converted into a double tie- beam system.

Figure 4: Informants Constructing Earthquake Resistant House

One Brahmin had constructed the two storeys reinforced cement concrete (RCC) house just one year before the earthquake and the house was partially damaged during the earthquake. He consulted with engineers for retrofitting the house. He realizes the importance of following building codes. His opinions after the earthquake was that:

> …. I spent around 4,000,000 rupees during the construction of my house before the earthquake. It was damaged by the earthquake. I spent around 1,000,000 to make it suitable for living. If I constructed the house following the building code, it would have been a bit costly but the earthquake would not have severely damaged the house.

Figure 5: Structure Affected due to the Earthquake

Figure 6: Affected Structure after Retrofit

From the informal discussion with people at the research site, it was found that before the earthquake people were not aware of the earthquake-resistant house. They believed that the RCC house is automatically earthquake-resistant; however, the aftermath of the earthquake proved that it is a wrong thought. However, after the earthquake, when people plan to construct a new house, they consult with an engineer to build an earthquake-resistant house, which is the positive part after the earthquake.

Difficulties due to Unfair Categorization of Victims

In the case of the categorization of victims, NRA engineers observed the houses and categorized them into three different groups based on the degree of damage. Red sticker (color) for a fully damaged house, yellow sticker for partial damage, and green sticker for that type of house that was not affected by the earthquake and was suitable for living without retrofit. Mr. Nepali, a hill Dalit, argued that the government grant was not sufficient for the reconstruction of houses for poor people because the government criteria for the categorization of the earthquake

victim was wrong as all victims were categorized in the same category which was not correct. His idea on categorizing the victims into three different groups as high (a), medium (b), and low (c) based on socio-economic status and distributing the government reconstruction grant of NPR 800,000, 500,000 and 200,000 respectively based on this category. If this type of category had been implemented, definitely poor and disadvantaged groups would have highly benefited. If not so, the government should take initiative for constructing new houses from their side rather than the distribution of reconstruction funds. Other earthquake victims were also supportive of the opinion of Mr. Nepali but they were worried about challenges in case of categorization of victims. In the study site, it had been observed that some people who were not affected by the earthquake also claimed for earthquake victim's cards in such a situation it was difficult to handle the situation without affecting the process.

A local school teacher from the Brahmin community also agrees with the challenge of the identification of actual victims. He argued that participatory wealth ranking (PWR) was an appropriate method for the categorization of victims.

Challenges Accessing Loan through Financial Institution

People faced challenges accessing the government's soft loan of up to NPR 2,500,000 to the earthquake victims for reconstruction in the context of Kathmandu valley (NRA, 2015). Those who are planning to reconstruct their houses using a government loan perceived that the procedure was complex and difficult. Many of the victims argued that the types of loans were only favorable for high-class people, who have a sufficient regular income. Moreover, the majority of the people were planning to utilize subsidized loans of up to NPR 300,000 with social collateral (NRA, 2015). But they were unaware of the procedure and process of distribution and they requested to provide a loan easily and promptly. Those who did not qualify for that type of subsidy loan were dependent on other sources like a loan from a local cooperative and local moneylenders with a high-interest rate varying between 18 to 24 percent per annum. However, in comparison to the rural part of Dhading district where the earthquake victims paid up to 36 percent per annum to the moneylender (Rawal et al., 2021), this interest rate is low.

Moreover, Tamang et al. (2020) found that more than 40 percent of families have taken a loan at high-interest rates. It was found that the wealthy families having high-salaried income or businesses had insured their houses, but most of the families in the area did not have insurance on their property. One high-caste Newar, who claimed insurance amount from an insurance company after the destruction of his home, shares his experience:

> … for business purposes, I had put the house as collateral to get a loan from a bank. For the loan, insurance was mandatory so I insured his house for NPR 5,000,000. The earthquake destroyed my house, and the insurance company provided only NPR 3,000,000. The insurance amount supported to build another house. I also utilized door/windows of a damaged house, which reduced my construction cost and I easily took the government support fund as well.

It shows that while wealthy households may suffer losses in a hazardous event, their property insurance, assets, financial credit, and stable employment generally secured them against the destitution that befalls on poor families exposed to the same event, whereas low-income house owners may be in a precarious position after earthquakes if they can neither qualify for reconstruction loans nor afford to pay the actual costs of rebuilding (Bolin, 1994; Bolin & Sanford, 2006).

Tenancy Issues and New Building Code for Reconstruction of the Houses

A land ownership certificate was mandatory to take the earthquake reconstruction grant (NRA, 2015a). As like in the other sites of the earthquake-affected area, it was found that land ownership had not been formally transferred to the household head from their ancestors in study site also hurdle in the reconstruction grant (Limbu, et al., 2019). Furthermore, most poor victims currently did not have official land ownership over their property (*Lal Purja*) and some of them have dual nature of ownership (*Mohiyani* land[1]) of the land. Land ownership has been made one of the principal issues to receive reconstruction grants and construct a new house on that land. Moreover, after the earthquake municipality enforced a new building code that for the construction of a new house required the minimum ground coverage for a land area of up to 2 *aana* 2 *paisa* (855.62 sq. feet), and each street inside the municipality should be compulsory 6 meters in width at minimum has exacerbated in house reconstruction. It is suitable and appropriate for systematizing the municipality but in the case of the core Bazar area of Dharmasthali, those codes are likely to make reconstruction even more difficult.

Mr. Shrestha started to rebuild his new house around 1.5 km far from his old house because of problems with the land ownership certificate of his old house plot. Furthermore, it was not possible to construct a house in his old plot following the new building code. He shared that he could build the house because he had owned another plot, but it would not be possible for poor families without another piece of land. He added the implementation

1. *Mohiyani* land: It refers to the land registered under the name of a single person, divided among, and cultivated by other individuals by paying the tax (*Kuth*) to its owner. Those who cultivate the land pay tax to the person under whose name the land is registered. This land system ended when cultivators became owners of the land because of their having cultivated the land, i.e. when they enjoyed their tenancy right (Shrestha, 1966).

of building codes was necessary for safety in the future but it was better to devise them based on local context. Negligence of the government had created negative impacts in some cases.

In the context of core Bazar area of Dharmasthali, some homes were being reconstructed without proper engineering practices and without adhering to municipal building codes. Thus, it could be easily interpreted that many of these houses were not built with adequate safety in place and may not be able to withstand earthquakes. It was also seen that the municipality did not operate effectively at the local level. One victim from high-caste Newar family had completed reconstruction without following the municipality building code. He lamented that if the municipality stopped construction of his house for not abiding by the building codes, then it would be difficult for him and his family. He had constructed the house also without consultation with an engineer. He argued that it was the duty of the government to address the issues of the poor. But government decisions would displace the poor people. He argued that the government enforces the policy but did not monitor its drawback. If the people were displaced by the government rules then it is necessary to address them by providing alternatives, which is the way of effective development. That had not seen in the context of Dharmasthali.

Figure 7: Housing Structure before the Earthquake (Source: Uttam Shahi)

In the case of Bhaktapur Durbar Square area, it was found that many of the houses were built in 1 *aana* or less than that. It created problems for the reconstruction of earthquake-damaged houses by following the municipality Building Bylaw[2], then the municipality revised the decision and made a favorable Bylaw for earthquake victims. The core Bazar area of Dharmasthali was somehow similar to the Bhaktapur Bazar area. So the municipality should make paperwork feasible and determine building code criteria based on location and type of land area as Bhaktapur Municipality had done after the earthquake by focusing on earthquake victims. If not so, whatever the future plan of the victims is unknown but it is true that after the completion of the reconstruction phase, probably if the government enforced the new building code strictly, that houses will have to be torn down, which directly impact poor people and they face further loss in future.

Figure 8: Housing Structure after Earthquake in the Same Place

Conclusion

The earthquake has shaken everybody equally, but this study shows that it is the poorer sections of the community that bore its major impact. Reconstruction is already underway for most families but inequality in the earthquake-reconstruction process has been observed in the community. People did not think of seeking help from the government but relied on their own grit to overcome the biggest challenge of their lives yet. However, in the case of financially deprived families, they were unable to begin reconstruction promptly. These families are still waiting for the reconstruction grant provided by the government. It supports that the unequal relations in and among societies affect the surrounding environment, especially in the context of government policy.

Moreover, there was inequality among different caste groups as well as within the Newars groups also. The study shows that the financial status of upper-caste

2. According to Bhaktapur Municipality Building Bylaws, 2060 for construction of a new house, the minimum ground coverage for land area of up to 2 *aana* 2 *paisa* (855.62 sq. feet) is 90 percentage for small houses and 80 percentage of the big one and plot less than (855.62 sq. feet) cannot get building permits to build a new house. However, in case of the earthquake-damaged houses in the core heritage areas, they can be reconstructed on the same plot as before with 100 percent coverage, regardless of land size (Shneiderman, et al., 2021).

Newars people is similar to that of Brahmins/Chhetris, whereas the financial status of low-caste Newars people matches that of hill Dalits. It indicates that during post-disaster reconstruction, class groups and status need to be re-categorized based on socio-economic conditions rather than ascribed or professed caste/ethnicity. Therefore, instead of distributing reconstruction grants to the affected families, the government should provide funds based on the socio-economic status of the affected families. These kinds of activities would help victims somehow forget all their pain and return to normal conditions. The study showed the need for the instrumental role of state-and local-level organizations designed to respond to emergencies and assist in disaster response and social protection.

Furthermore, the implementation of the new building codes to make earthquake-resistant buildings, while sound and rational, added challenges for the financially less well-off to reconstruct their houses. While implementing this decision, it is the poor victims who have been highly affected. So there is a need for the government to provide the necessary support for poor families to rebuild their houses and their lives following the building codes. The government should also promote social policies and practices that assist people in meeting their needs during and after disasters and also help them to prepare for potential natural disasters.

Declarations

Ethics Approval and Consent to Participate
I declare that this research has been conducted ethically and assured the confidentiality of the respondent and participants required for the social research.

Consent for Publication
Not applicable.

Availability of Data and Materials
Data are available.

Competing Interests
There is no competing of interest to disclose.

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Authors' Contributions
Not applicable

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References

Amnesty International. (2015). *Nepal: Earthquake recovery must safeguard human rights.* Amnesty International Ltd.. https://www.refworld.org/docid/556d775c4.

Bolin, R. (1994). Post disaster shelter and housing: Social processes in response and recovery. In R. Dynes, & K. Tierney (Eds.), *Disaster, collective behavior, and social organization* (pp. 115-127). University of Delaware Press.

Bolin, R., & Stanford, L. (2006). The Northridge earthquake: Vulnerability and disaster. *Routledge*.

Central Bureau of Statistic [CBS]. (2011). *National population and housing census.*

Gamburd, M.R. (2013). *The golden wave: Culture and politics after Sri Lanka's tsunami disaster.* Bloomington and Indianapolis: Indiana University Press. https://www.amazon.com/Golden-Wave-Culture-Politics-Disaster/dp/0253011396?asin=0253011396&revisionId=

Gellner, D. N. (1999). Low castes in Lalitpur. In D. N. Gellner, & D. Quigley (Eds.), *Contested hierarchies: A collaborative ethnography of caste among the Newars of the Kathmandu Valley, Nepal* (pp. 264-297). Oxford University Press, New York.

Hoffman, S. M., & Oliver-Smith, A. (1999). Anthropology and the angry earth: An overview. In A. Oliver-Smith, & S. M. Hoffman (Eds)., *The angry earth: Disaster in anthropological perspective* (pp. 1-16). Psychology Press.

Khattri, M. B. (2021). Differential vulnerability and resilience of earthquake: A case of displaced Tamangs of Tiru and Gogane villages of central Nepal. *Progress in Disaster Science., 12*. http://dx.doi.org/10.1016/j.pdisas.2021.100205

Kulatunga, U. (2010). Impact of culture towards disaster risk reduction. *International Journal of Strategic Property Management, 14(4)*, 304-313. https://doi: 10.3846/ ijspm.2010.23

Limbu, B., Suji, M., Subedi, P., Rawal, N., & Baniya, J. (2019). Reconstructing Nepal post-earthquake experiences from Bhaktapur, Dhading and Sindhupalchowk. *Reconstructing Nepal Working Paper Series.* Social Science Baha, Kathmandu.

Ministry of Home Affairs [MoHA]. (2016). Disaster risk reduction in Nepal: Achievements, challenges and way forward. *National Position Paper for the AMCDRR,*

in New Delhi, 2-5 November, 2016. Ministry of Home Affairs, Nepal.

National Reconstruction Authority [NRA]. (2015). *Procedure for private housing reconstruction subsidized loan for earthquake affected households, 2015.* National Reconstruction Authority, Governmnet of Nepal, Kathmandu.

National Reconstruction Authority [NRA]. (2015a). *Grant disbursement procedures for private houses destroyed by the earthquakes 2015*. National Reconstruction Authority, Government of Nepal, Kathmandu.

National Reconstruction Authority [NRA]. (2016). *Grant disbursement procedures for private houses affected by the earthquake 2016*. National Reconstruction Authority, Governmnet of Nepal, Kathmandu.

Oliver-Smith, A. (1996). Anthropological research on hazards and disasters. *Annual Review of Anthropology, 25(1)*, 303–328. http:/www.jstor.org/stable/2155829

Oliver-Smith, A. (1999). What is a disaster?': Anthropological perspectives on a persistent question. In A. Oliver-Smith, & S. M. Hoffman (Eds.), *The angry earth: Disaster in anthropological perspective.* (pp. 18-35). Psychology Press.

Oliver-Smith, A., & Hoffman, S. M. (2001). Introduction: Why anthropologists should study disasters. In A. Oliver-Smith, & S. M. Hoffman (Eds.), *Catastrophe and culture: The anthropology of disaster* (pp. 3-22). School of American Research.

Rawal, N., Suji, M., Limbu, B., Subedi, P., & Baniya, J. (2021). Reconstructing Nepal, Dhading – Patchwork Policies and Multiple Structures. *Reconstructing Nepal Working Paper Series.* Social Science Baha, Kathmandu.

Robbins, P. (2004*). Critical introductions to geography: Political ecology.* Malden:Blackwell Publishing.

Shneiderman, S., Hirslund, D., Baniya, J., Billon, P., Limbu, B., Pandey, B., & . .. Warner, C. (2021). Expertise, labour, and mobility in Nepal's post-conflict, post-disaster reconstruction: Law, construction, and finance as domains of social transformation. In M. Hutt, M. Liechty, & S. Lotter (Eds.), *Epicentre to aftermath: rebuilding and remembering in the wake of Nepal's earthquakes* (pp. 49-86). Cambridge University Press. http:/www.doi.10.1017/9781108991636.003

Shrestha, B. (1966). In *An introduction to Nepalese economy*. Ratna Pustak Bhandar, Kathmandu.

Singh, T., Sharma, S., & Nagesh, S. (2017). Socio-economic status scales updated for 2017. *International Journal of Research in Medical Sciences, 5(7)*, 3264-3267.

Tamang, M. S., Shakya, D. V., Pradhan, M. S., Gurung, Y. B., & Mabuhang, B. (2020). *Community resilience Capacity: A study on Nepal's 2015 earthquakes and aftermath. Nepal.* Central Department of Anthropology, Tribhuvan University; Kathmandu. http://anthropologytu.edu.np/wp-content/uploads/2020/12/Community-Resilience-Capacity-Report-for-Web.pdf

Young, J. (2015). Introduction. ----------(Eds.), *Pathways to earthquake resilience in China* (pp. 10-12). Economic and Social Research Council, Overseas Development Institute. https://cdn.odi.org/media/documents/9893.pdf

Kumar Prasad Aryal (https://orcid.org/0000-0002-0131-4517), completed his Masters of Philosophy in Anthropology from Central Department of Antthropology, Tribhuvan University and has a specialization in disaster studies. He was awarded with the Bihari Krishna Fellowship for Ethnographic Research 2015. Mr. Aryal worked as a researcher in Social Science Baha. He does research on environmental and social impact assessments of hydropower, road, airport, drinking water.

Email: aryalkumar1@gmail.com