

# **Ignorance of Local Needs in Construction of New Houses of the Earthquake Hit Dalit Community in Central Nepal**

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## ***Abstract***

*This article asserts ignorance of local knowledge system, need, social, and cultural settings in construction of earthquake resilient houses in Dalit community. Dalit communities are considered as economically backward ethnic caste group in Nepal. The article is based on the field study carried out in Dhading district of Bagmati Province. The guiding theoretical framework of the study is the anthropology of disaster focusing on resilience through holistic approach to reveal undermining of local contexts in reconstruction of private houses. The methodological approach consists of qualitative research tools supplemented by household census.*

*As part of earthquake resilient house construction, the government of Nepal provided cash grant support to the families with severely damaged houses. Such families identified as red card holders. Findings of the study clearly reveal that the cash support is not enough to address the local social and cultural needs of Dalits in construction of houses. There is heterogeneity in Dalit communities in terms of social cultural bonding, social relations, and economic status. The cash support in the lump sum basis under the blanket policy approach regardless of household income, family background, and economic status hardly address the local contexts. Most importantly, the construction process highly concentrated on building of house structures in the prescribed standards of the government focusing on technical engineering rather than accommodation of local settings and needs.*

*Key Words: Nepal Earthquake, House Construction, Dalits, Local Needs, Ignorance*

## Introduction

Nepal has been affected by natural disasters such as earthquakes, floods, landslides, lightning, and draught regularly. The country is one of the most disaster-prone regions in geological terms. The country ranks 4<sup>th</sup>, 11<sup>th</sup> and 30<sup>th</sup> in terms of climate change, earthquake and flood risk respectively (Nepal et al., 2018). Nepal's first recorded earthquake in 1255 A.D. killed one-third of the population of the Kathmandu Valley along with the King Abhaya Malla. The last great earthquake of magnitude 8.4 in 1934 A.D. resulted more than 10,000 deaths in the Kathmandu Valley. Most of the infrastructure and major heritage sites were damaged. There have been earthquakes causing a severe human and physical loss in 1934, 1980, 1988, and 2011 (NPC, 2015, p. xi). Some elderly people still remember the 1934's earthquake that is popularly pronounced *nabbe salko buichaalo* in the Nepali language as a major earthquake with an 8.4 Richter scale magnitude. It was estimated that ten thousand people lost their life in Kathmandu Valley alone from this earthquake in 1934 (Shamsher, 2015).

The disaster-induced impact is severe on the life of the people and local community. The 2015 earthquake damaged not only private houses but also social, cultural heritages and public infrastructures in Nepal. For the reconstruction of private houses, the government of Nepal provided cash grant amounting of three lakhs Nepalese rupees to the earthquake hit families. For the identity purpose, the government issued the red card to the families with severely damaged houses as their identify.

The disaster like earthquake provides a great challenge to the people, their work, and everyday life. However, this article only treats with the 2015 earthquake. This recent 2015 earthquake was one of the biggest natural disasters in history with 8997 human casualties and physical infrastructures including private housing, public structures, and cultural heritage (NPC, 2015). The damages on the private housing by the earthquake are a major concern of local people. The damages on the private housing were divided into three categories with completely damaged, damaged but standing, and not damaged. The government provided the red card to the families whose houses were completely damaged by the earthquake. The status of damaged houses throughout the country by the 2015 earthquake is presented below (see in the table 1).

**Table 1: Status of Houses Damaged by 2015 Earthquake**

S. N.	District	Completely Col-lapsed		Damaged but Standing		Not Damaged		Total	
		Nos	Percent	Nos	Percent	Nos	Percent	Nos	Percent
1	Sindhupalchok	69,329	78.1	18,578	20.9	834	0.9	88,741	10.1
2	Nuwakot	37,581	67.8	37,756	30.9	1,811	1.4	77,148	1.4
3	Dolakha	34,070	56.2	25,543	42.1	1,026	1.7	60,639	6.9
4	Dhading	33,389	48.7	51,646	48.9	7,087	2.3	89,122	8.8
5	Gorkha	25,153	45.5	49,269	51.2	3,652	3.3	78,074	5.8
6	Kathmandu	23,283	37.5	26,163	57.9	1,678	4.6	51,124	10.2
7	Kavrepalanchok	22,471	36.7	68,832	58.6	6,716	4.6	98,019	3.8
8	Lalitpur	12,154	33.5	19,403	63.8	1,536	2.7	33,093	3.4
9	Ramechhap	10,679	32.2	46,554	63.1	1,390	4.7	58,623	8.9
10	Bhaktapur	10,101	22.9	19,273	70.2	823	6.9	30,197	11.2
11	Rasuwa	8,567	18.2	3,903	79.4	174	2.4	12,644	6.7
12	Sindhuli	7,815	12.9	51,407	75.8	9,528	11.3	68,750	4.5
13	Makwanpur	7,235	11.4	56,294	74.8	27,465	13.9	90,994	7.8
14	Okhaldhunga	5,064	8.0	29,832	61.9	4,456	30.2	39,352	10.4
Total		306,891	35.0	504,453	57.6	65,176	7.4	876,520	100.0

**Source: Central Bureau of Statistics, 2017**

Anthropologically, the damaging of houses is not only a physical phenomenon in the community. It is all about the social, political, and economic domains in a broader meaning. The impact induced by the earthquake is severe in the life of local people and the community. The impact has multi-facets on the social, cultural, political, and economic life of local people. In this context, Tamang et al., (2020) argue that impacts are more prominent in socially and economically excluded groups including Dalits in the country. The human development index of the groups is low in comparison to the national average. The policy theme including the reconstruction of private housing of the government always carries high value to such groups to address their social, cultural, and economic needs in their local context. The impact of disaster in Dalit community is high. Dalits lie in lower social, economic and political spectrum in Nepali society.

The Nepali society is based on the caste system. Dalits are not a homogenous group. Like the other ethnic/caste groups in Nepal, their population is equally divided and their heterogeneity extends to language, religion and culture. More specifically, their heterogeneity and hierarchy can be better explained in three broad regional groups: Dalits in the Hill community, b) Dalits in the Newari community, and iii) Dalits in the Tarai

community (Dahal, et al., 2002, p. V).

Thomas et al., (2009) states that the disaster is a multi-faceted phenomenon that incorporates social, cultural, political, and economic aspects of human beings. The social vulnerability is furthermore consisting of different aspects in terms of income disparity, gender, class, age, literacy, family and households. Therefore, the disaster covers various aspects of the work and life of the people. The major dimensions of the disaster resilience are environmental, social, cultural, political, economic, physical, and technological factors. Natural, biological, and socio-cultural dimensions are also taken into consideration for disaster recovery policies, strategies, and actions. Looking at the existing literature on disasters, most of them have examined this phenomenon by taking a few indicators mainly loss of life and property (Oliver-Smith, 2005). Following the rescue and relief process, Khatri (2021, p. 5) states that community members were the first eyewitness and experience of disaster, who expressed through the act of rescue by immediate relatives and neighbors, which was possible due to the maintenance of humanitarian and cultural practices.

The terms recovery and resilience often come together in the academic discourse on natural disasters. Resilience is a measure of the ability of ecological systems to absorb changes in state variables, driving variables, and parameters, and persist (Holling 1994, p. 18). Meanwhile, resilience and coping mechanism are highly stated subjects in recent anthropological studies (Cutter et. al., 2003). These terms are used to describe the adaptive capacities of individuals, human communities, and larger societies (Tiernan et al., 2019).

Social researchers have focused on the physical aspects of disasters rather than the social and political aspects of governments that have been lured into putting their trust in grand physical protection and mitigation measures. Babbi (1995) argues that most disaster problems in the Third World are unsolved development problems. Disaster prevention and mitigation is thus primarily an aspect of development. Disasters can become vehicles for change and involve both development and relief agencies in a long-term program aimed both at development and prevention and mitigation. Studies in the development model including the aftermath development model based on social capitals of the earthquake victims in Nepalese context have rarely been studied in cultural viewpoints. In this context, hearing from local people who experience disasters and locally available knowledge systems are rarely documented and voices from the bottom are rarely documented in policy level and academic sectors for policy implementation.

There are different versions of the underdevelopment status of Nepal and the people. Such versions and approaches also closely linked to the development model of the post disaster. Mishra states that Nepal's underdevelopment is the result of the world economic system that has pushed Nepal historically into the periphery of the economic cycle. His focus is on Nepal's involvement in a big capitalistic market and the economic process of the neighboring country is the current underdevelopment reason of the country (Mishra, 2008). On other hand, Bista (1994) argues that social and cultural belief system and *chakari* plays role in the underdevelopment process. He stresses the fatalistic belief and value system of the Nepalese for the underdevelopment.

There is lacking in linking the community capital and value system with the development approach in a broader spectrum that hinders the local people and their knowledge systems in modern development phenomena. There is also a gap in the utilization of local knowledge practices, local formal and informal institutions and the value system of different caste groups in the reconstruction of the houses of Dalit communities. They are also highly vulnerable to the impacts triggered by the earthquake. Therefore, the degree of impact is more serious and critical in their livelihood, social, and cultural life.

### **Nepal's 2015 Earthquake**

The article is based on the 2015 earthquake in Nepal that laid big social, cultural and economic impacts in life of Nepalese people. On 25 April 2015, earthquake with a magnitude of 7.8 Richter scale shook the country having epicenter in Gorkha district in Central Region. Barpak Village of Gorkha district was the epicenter of the earthquake in 25 April 2015. It is situated in the Northern part of Gorkha district. Serious of aftershocks also occurred but that major shock was on 15 April 2015 (Tamang, et al., 2020). Major shock and aftershocks had great impacts in social, economic and physical life of local people with number of reasons such as loss of family members, damages of private houses, loss of livestock, cultivating land and many more.

It is estimated that the major earthquake in 2015 devastated the country causing a 706 billion of Nepalese currency in damages and losses (NDMRH, 2020, p. 59). The earthquake in which about nine thousand people lost their lives, twenty three thousand injured and over a half million of private houses destroyed. The earthquake affected in many parts of Central Nepal since the country has not faced a disaster of scale for over eighty years. Furthermore, the earthquake took the lives of seven hundred thirty-three people with three hundred forty male and three--hundred ninety three female in Dhading

district in Bagmati province of Central Nepal (NDMRH, 2020). Sindhupalchok district stands in the first position whereas Dhading district is in fourth rank in terms of physical damage and human casualties due to the earthquake.

## **Methodology**

The methodology of the study has blended both qualitative and quantitative research tools for data collection and analysis. Both primary and secondary sources of data used in data presentation and analysis. The primary data were collected through household census, key informant interview, focus group discussion, and field observation whereas secondary sources of data obtained from relevant academic works and different publications. The purposive sampling method was applied for quantitative sampling of household census covering 167 Dalit families. The census carried out in one hundred sixty-seven red cardholder Dalit families whose houses were completely damaged by the earthquake.

## **Study Area, Demography and Livelihood of Community**

The study area lies in Ward no. 4 of Jibanpur in Dhunibeshi municipality of Dhading district in central Nepal. The Ward no. 4 of Dhunibeshi municipality in Dhading district. This Ward has the dense settlement of Dalit people. The study area can be reached by motorable road from Dharke, a small market center on the Kathmandu Pokhara section of the East-West highway. It is just 7 KM far from Dharke. It is also reachable through Kathmandu Sitapaila Road with the distance of 22 KM.

The major settlement of Dalit communities in the study area includes Mijar Tol, Kotkhal, Neupane Danda, Thanti, Gairee Gaun, and Chhap Gaun. Dalits with three sub caste groups; Damai, Kami and Sarki were included in the study. Tallo Mijar Tol is comparatively wealthy in economic status and highly resilient. Furthermore, there is no homogeneity in household level income even in Dalit sub caste groups. Meanwhile, the annual income level of Damai is higher than that of Kami and Sarki people. It is because that Damai people have improved their tailoring occupation and have clothing and tailoring shops in Jibanpur and nearby market centers. The reconstruction progress started to accelerate in August 2016, when a campaign was undertaken to finally distribute the reconstruction grant installment of Nepalese Rupees 50,000 to the affected families that had signed grant agreements. The grant agreement requires affected families to rebuild an earthquake-resistant home following government formulated standards and guidelines to receive further aid.

The occupation is mixed type in the study area. However, agriculture is dominant in

the study area as said by local people. However, production from agriculture is not enough to feed their family members. Therefore, the agriculture is supported by livestock rearing, and *jayala majduri* (paid work), and traditional occupation. The paid labor includes in different sectors such as in the transportation section, small-scaled business, catering and skilled *jayala majduri* (paid labor). Although foreign employment was not found as major occupational type in the study area. Single type of livelihood pattern is hard to support Dalit people to survive therefore they have mixed types of occupational patterns. The traditional occupation of Sarki community is leatherwork and that of Damai people is tailoring and musicians whereas Kami are goldsmiths, blacksmiths, and bamboo workers.

## **Result and Discussions**

### **Cash Grants Policy and Model**

The government of Nepal established cash grant policy model for the reconstruction of private houses. Established in April 2015, the Nepal Reconstruction Authority (NRA) with the main objective of rapid reconstruction of the physical damages caused by the massive earthquakes of April 25 and May 12, 2015, and their aftershocks that provide support for the reconstruction of both public and private structures. The NRA has different implementing layers including at the district level for the overall implementation of the reconstruction works. However, NRA has overall responsibility for the reconstruction of earthquake-affected structures. The scope of NRA is on the reconstruction of damaged infrastructures; both public and private. However, socio-economic dimensions of the earthquake such as livestock, local economy, culture, and rituals are highly ignored in the reconstruction approach of the NRA. Again, the government of Nepal dissolved the NRA in December 2021 with completion of 92 percent of private housing construction.

For construction of new house, the government has provided the cash grants in three installments grant through the banking system. The grant was provided for the construction of earthquake resilient houses. They received Rs. 50,000 in the first instalment, Rs. 150,000 in the second instalment and Rs. 100,000 in the third and final instalment. However, reconstruction policy of the NRA was top down approach blanket approach with the cash support regardless of damage types by the earthquake. The private houses were built by the local communities themselves with the cash support by the government through the NRA (see table 2).

**Table 2: Installment of Cash Grant Release for Construction of New House in Study Area**

Installment	Amount (Rs.)	Time	Required Milestone
First	50,000	Ashoj, 2072 BS (Sep/Oct 2015)	Starting Phase
Second	150,000	With progress of the house con- struction	Damp Proof Course (DPC) founda- tion of house, Verification by NRA Engineer
Third/Last	100,000		Inspection and Verification by NRA Engineer
Total	3,00,000		

**Source: Field Survey, 2020**

Despite differences in economic status of Dalit families, the government resilience scheme was particularly confined to the cash grant of three lakhs Nepalese Rupees for construction of the earthquake resilient and safer house. The families with poor economic conditions did not support to build the house with this amount of money. There was completely destruction of houses as the result the beneficiary had red card as identify of severely-hit families.

### **Ignorance of Local Needs aftermath of Earthquake in House Construction**

The house construction at community level was highly undermined the local needs and practices without integrating social and cultural environments. Although reconstruction policies often overlook social capitals, local settings, and local knowledge systems in policy formulation and implementation. There are always gaps in the local knowledge system, policy formulation, and implementation of such policies in Nepal (Khatri, 2021). In the study area, the reconstruction cycle and process purely considers as techno-centric engineering work ignoring local needs, settings, and long run proven knowledge practices that already prevailed in the local community.

There are differences in economic status within the Dalit sub-caste groups in the study area. Therefore, economically poor Dalit families did not top up the additional money to build new houses. In the context of a financially poor situation, Dalits built a small house with two rooms in compliance with the government guideline.

Moreover, development is all about the social, cultural, and economic processes in a holistic process. The anthropology of development always puts local people and their



social and cultural needs in the central point of analysis. Baker and Chapman (1962) state that there is a special concern with how cultural systems such as the beliefs, behaviors, and institutions, characteristics of a society or group figure at the center of that society's disaster vulnerability, preparedness, mobilization, and prevention. Meanwhile, Oliver-Smith (1996) argues that the disaster shapes the knowledge of local people on how they respond to the disasters not just as members of the public but also working in emergency management, law enforcement, and other governmental agencies. Thus, it seems worthwhile for those who study disasters to gain a thorough and systematic understanding of how disasters are interpreted in a variety of contexts and periods.

In this context, the anthropological perspective of the disaster focuses on people's response, perception, and knowledge on hazard response and coping mechanism with the utilization of local value, resources, and community assets. Anthropologists have emphasized local models of risk construction and stressed the importance of understanding the socio-cultural context of judgments and indigenous linguistic categories and behaviors about what is dangerous and what is not. They note that public perceptions about risk and acceptability are shared constructs; therefore, understanding how people think about and choose between risks must be based on the study of culturally informed values as well as their social context of poverty or power (Cernea, 2000).

Local people are placed in the central theme of argument and analysis in anthropological studies. It seems worthwhile for those who study disasters to gain a thorough and systematic understanding of how disasters are interpreted in a variety of contexts and periods (Barker & Chapman, 1962). Timeline after the disasters also plays key roles in the recovery and resilience status of affected individuals, families, and communities. The earthquake was also connected to various emotional factors such as feeling, love, trauma, and caring for the loss of family members, relatives, and community people. The impact in terms of physical structures for example collapse of houses, cowsheds, and cultural centers is also high.

### **New and Old Houses in Cultural Aspect**

Dalit people have no cultural and social ownership to new house though new houses are earthquake resilient and safer in terms of government standards. Although the earthquake hit- families constructed new houses with the support of the cash grant, majority of families have a one-storied house with two rooms. They often call it as *bhukampako ghar* (earthquake home). Such houses have no plenty of space for grain store, sleeping, and

space for *puja aaja* (worshiping purpose).

Dalit people argued that the old house was good for them although made up of mud and stone. It was warmer during the winter season. The engineering aspect of new houses is completely different from old houses. Old houses were designed according to the need and requirements of Dalit people in local environmental contexts and settings. The design also counted various aspects such as geology, soil and land structure, direction, space, and rooms in the settings. The houses had space for a kitchen, bedroom, restroom, storeroom, and verandah (*koushi*). According to narratives and statements of local people, the house is also a symbol of culture and traits. Therefore, a house is not merely a set of engineering but also consists of social, cultural, and religious dimensions.

The old house not only provides shelter for Dalit families but also it fulfills the needs of local people. Therefore, the house is also a representation of social and cultural aspects in a holistic approach. The older houses were designed to their local and cultural setting with space management, puja space, sleeping space, and storage of grains. Old houses of Dalit community adjusted to their environment including designation and engineering with the cultural viewpoint of analysis. On the contrary, Dalit community has not adapted to the new house in terms of social and cultural aspects due to limited capital and private house construction policies of the government.

### **Techno centric Approach in Construction of New Houses**

According to local people, the overall construction process, cash grant approval, and design of houses was guided by the technological viewpoint rather than need assessment. The local government did not carry out the need assessment for the construction of new houses such as budget needed, rooms and space in houses, family income, and wealth. The basket fund follows of three lakhs in three installments to each red cardholder Dalit families supported for the building of two room houses. Local people reported that the new houses are not enough to support the social, cultural, and economic needs of Dalit in their local context. Although many respondents opined that, they liked old houses that were constructed in their local environmental settings they wanted to build a new modern *pakki* (cemented) house after the earthquake. They wanted to build *pakki* house that looks before, modern *pakki* house and the same type of house like before the earthquake. However, the money provided by the government was not enough to form a modern *pakki* house.

In this context, Pigg (1993) elaborates how local people assume development phenomena (*bikas*) in Nepal from the ground level. It is something that has to do with

outside their communities and people. They are often talking about material reality when they use the word *bikas* in daily conversation: water pipes, plastic buckets, electricity, video cassette recorders, trucks, commercial fertilizer, cement buildings, airplanes, new breeds of goats and chickens. Significantly, it is the non-local origin of these things that makes them *bikas* (p. 48). This narration and perception of development have been created historically since Rana regime with the starting of the so-called modern development era in the country. Local communities were excluded historically from the development phenomena. More preciously, they have no experience of meaningful participation in the *bikas* so they assume outsiders perform its activities not with their communities and local people.

### **Conclusion**

Need assessment of local people is highly important for policy formulation to reflect the local needs, economic, and socio cultural backgrounds. Therefore, the holistic need assessment of the communities provides a better insight for policy level backing on reconstruction and recovery process rather than providing only providing cash support through top down approach.

Listening to the communities before implementation of reconstruction policies relating to disaster and aftermaths also provides ground reality and field-based reality insight for reconstructions and its sustainability. Dalit families with no regular income and family wealth still have a loan borrowed from the local financial institutions for the construction of new houses. The amount of the cash grant to all Dalit families is the same despite their social, political, and economic differences. Although the cash is enough for middle-class Dalit families, it is insufficient for financially poor families with no regular income and family assets. In this context, before the formulation of any policy guidance, the assessment on heterogenetic characters about how it works in diverse social groups, merits and demerits of policy implementation, holistic analysis of policy including social, cultural, economic, and regional aspects are always matter of concern.

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