



Janapriya Journal of Interdisciplinary Studies (Jjis)

[A Peer-Reviewed Open Access Journal; Indexed in NepJOL]

ISSN: 2362-1516 (Print), ISSN: 2773-8000 (Online)

Published by Janapriya Research and Consultancy Center (JRCC)

Janapriya Multiple Campus, Pokhara

Journal Homepage: www.janapriya.edu.np

Research Article

Assessing The Role of Women Masons in Earthquake Reconstruction in Dolakha District, Nepal

*Baikuntha Pandey¹, Rita Thakuri²

¹Patan Multiple Campus, Tribhuvan University

²Research Assistant

*Corresponding Email : baikuntha2027@gmail.com

Article History : Received Oct. 2024 Revised Nov. 2024 Accepted Dec. 2024

DOI : <https://doi.org/10.3126/jjis.v13i1.75574>

ABSTRACT

Nepal is one of the most disaster-prone countries globally and has experienced significant seismic activity, including the devastating Mw 7.8 earthquake in 2015. This earthquake underscored the urgent need for skilled masons to construct earthquake-resilient buildings, particularly for the reconstruction of over 900,000 houses. The study seeks to identify factors affecting women's participation in the construction sector, assess the socio-economic benefits of their work, and explore the sustainability of their skills. The study is based on a qualitative research design. Information is gathered from women masons, municipal representatives, and other stakeholders to ensure a comprehensive study. The findings highlight the transformative role of women in the construction sector, showcasing their potential to alleviate poverty, break cultural barriers, and strengthen the workforce. This research aims to inspire policymakers and communities to promote gender inclusivity in skilled labor, ultimately contributing to Nepal's economic resilience and disaster preparedness.

Keywords: Cultural barriers, disaster-prone, earthquake-resilient, reconstruction, sustainability

Copyright 2024 © the Author(s) and the Publisher



Janapriya Journal of Interdisciplinary Studies (Jjis), Vol. XIII, 2024 [pp. 138 - 151]

INTRODUCTION

Nepal is listed as the 20th most multi-hazard-prone country in the world, and 11th in earthquake risk (MOHA, 2015). Nepal sits astride the boundary between the Indian and the Eurasian plates. The existence of the Himalayan Range, which has the world's highest peaks, is evidence of the continued tectonic activities beneath the country. As a result, Nepal is very active seismically (Dixit, 2004). The history has witnessed at least one big earthquake every 70-80 years. A recent, Mw7.8 Earthquake hit Nepal on April 25, 2015, with several human casualties of 8,790 and serious injuries of 22,300. It has destroyed 6,04,930 houses completely and 2,88,856 houses partially. The estimated economic loss is US\$ 7 billion (MOHA, 2015; NPC, 2015).

The initiative to train women in masonry work might have started many years back. 1,11,000 women were working in the construction sector (CBS,2019). However, many women masons have been deployed after the 2015 Earthquake during the reconstruction period (NRA, 2021). Cultural barriers and the traditional mindset of people are the major challenges to accepting women as masons for building construction is still not so easy (HRRP, 2018). The sustainability of their skill is also questioned by many stakeholders, communities, and women themselves. At the same time, it is interesting that women are joining the skilled labor force despite the challenges. The socio-economic factors that encourage women to join masonry work, the challenges they face, and the opportunities they have gained, have not been studied. The demand for a mason for the reconstruction campaign and its supply measures are not assessed and need to be studied. The study aims to explore the opportunities and challenges for women masons in Nepal.

The study concentrates on the socio-economic aspects of the disaster-hit area. The role played by women in such a lucrative job is analyzed where skilled human resources in masonry are scarce. The income generated by women yields multiple benefits to the family and society but the role of women as a mason was not explored. So, this study tries to meet the study gap.

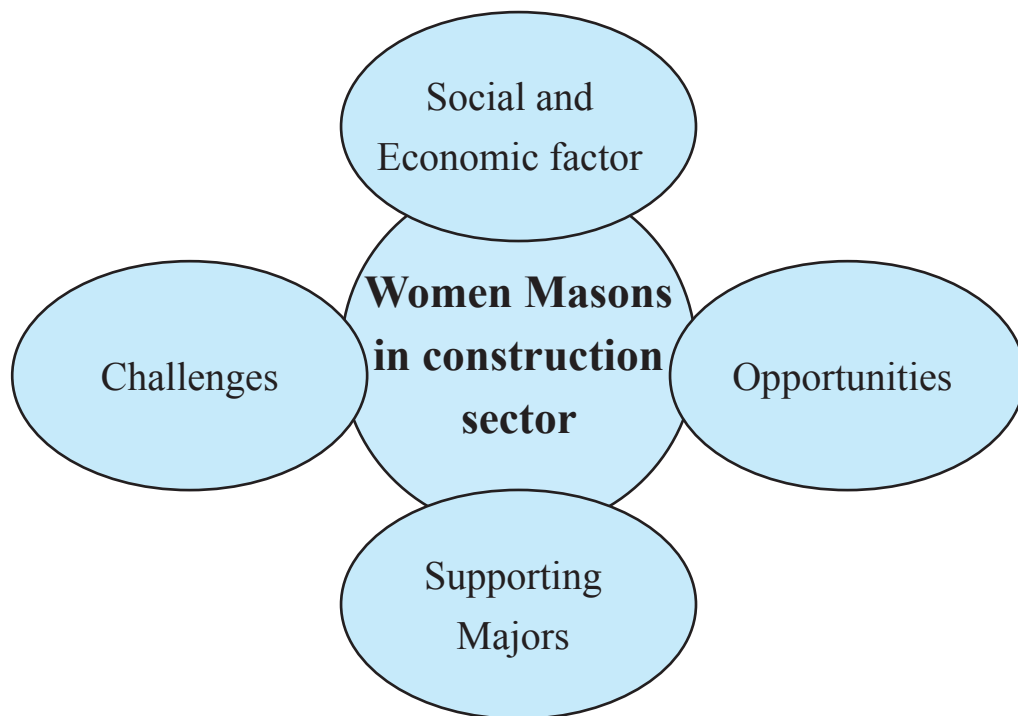
DATA AND METHODS

This study was conducted in the periphery of women's participation in the earthquake reconstruction of Nepal in the Dolakha district. Involving women in masonry work is a

milestone in the history of Nepal because women were confined to the four walls of a house. The earthquake has opened the sluice for women in society with different responsibilities. This extended panorama of women empowerment. The interlinkage of the four aspects captures the broad spectrum of Women’s masonry which is projected as a conceptual framework of this study.

Figure 1

Conceptual Framework



A qualitative survey method was executed to gather information from the women masons from the study area by formulating semi-structured questionnaires. Key Informant Interview (KII) was conducted with male masons, house owners, municipal representatives, and government officials. The snowballing sampling technique was used for the participants’ recruitment process. This study was conducted when the Government of Nepal officially concluded the reconstruction process, whence most of the trained women masons were not easily available for interviews. Therefore, this technique was useful to identify appropriate participants for the study.

This study was conducted in the Dolakha district of Nepal. Dolakha was one of the

major affected districts among the 14th Most affected districts from the 2015 Earthquake with more than sixty thousand private housing damaged across the district (NRA, 2021). This study was conducted in a different location with the suburban and rural settings of Dolakha District namely Bhimeshwor Municipality, Bigu Rural Municipality, and Kalinchowk Rural Municipality.

Respondents/ participants were chosen on a spatial basis like rural/semi-urban, socio-economic, cultural condition, and different age groups of trained women masons. Since the reconstruction was officially concluded in September 2021 and most of the houses in affected areas have been completed, it was difficult to find enough trained women masons. Hence, based on the availability of trained women masons semi-structured interviews have been conducted with seven women masons(n=7) in three different rural and semi-rural settings. During the interview due to data saturation, only seven semi-structured interviews were conducted with trained women masons, similarly, 11 Key informant interviews (n=11) were conducted.

The researcher visited Dolakha District to conduct interviews in March 2023. The first interview started at Bhimeshwor municipality. Later she helped to get connected with other women masons. Interviews with two women masons, a few house owners, and municipal/government officials were conducted at Bhimeshwor municipality. After that interview, researchers reached to Bigu Rural Municipality of Dolakha where three women masons were interviewed along with two representatives of the local government. At last, Kalinchowk Rural Municipality was visited where two more women masons were interviewed. Similarly, KII was conducted in each local body. A total of 11 key informant interviews were taken from house owners, male masons, government officials, and local government representatives of different rural/municipalities of the study area by using open-ended questionnaires. The interview took nearly an hour with one representative. Before starting the interview, all the ethical procedures were fulfilled, and consent was taken from the informants after briefing the objectives of the interview.

All the interviews were recorded with verbal and/or written consent of the interviewee, then it was transcribed and translated into English language. During the thematic data analysis procedure of this study, first, all the interviews were listened to and re-listened for transcription. After the transcription and translation into the English language, all the interviews were compiled, and the participants were given code names based on the type of stakeholder they represented such as:

- Women Masons are coded as WM1, WM2, WM3, WM4, WM5, WM6, and Wm7

- Male Mason/Petty Contractor was coded as: MM1, MM2, MM3, MM4, MM5
- House owner was coded as; HO1, HO2
- Municipal Official was coded as MO1
- Government Official was coded as GO1
- Representatives of Local Government were coded as LGR1, LGR2

After the transcribing, initial codes were developed which are called primary codes. These codes were the repeated words/phrases in most of the interviews by the participants. Primary codes were reviewed, and secondary codes were developed. Thus, the primary and secondary codes helped to develop the themes for the data analysis.

The data analysis was done in two thematic segregations namely, i) challenges women masons faced while working in the construction sector and ii) the socioeconomic impacts of women masons received by masonry skills.

Research ethics were duly considered scrupulously during the process of data collection and presentation. Considering the ethical aspect of research, the respondents were made aware of the recordings being hand, they were also told a priory the purpose of the research for which their views are being recorded. Written applications were presented to receive the information from the municipality office for further study of the thesis. Primarily concerned with the protection of rights, dignity, and welfare of those candidates who participated in the research process, three main ethical considerations were made during the research. They are:

Informed consent: The respondents were informed, before the study, about why this study is being conducted and what will be the outcome of the study. Freedom of choice whether to participate or not, was offered. Both verbal and written consent were taken.

Do no harm: Considering the principle of “not harm” the researcher assured the participants that this research does not create any threat to one’s self-image, feelings, and dignity.

Confidentiality and protection of privacy: As invasion of privacy and breach of confidentiality are the causes of harm, the right to withhold information and anonymity is strictly safeguarded in this research.

RESULTS AND DISCUSSION

Under each theme, different sub-titles were included, and responses were recorded accordingly.

Table 1

Thematic Box

Theme	Respondents
1. Challenges women masons faced while working	
Household responsibilities	WM1, WM2, WM5
Patriarchal Mindset	WM1, WM2, MM1, HO1, MM3, LGR2
2. Socioeconomic impact of women mason received by masonry skill.	
Breaking the barrier: Rebuilding houses and Gaining Self confidence	MO1, WM1, WM3, WM4
Gaining Financial Independence	WM1, WM2, WM4
Rebuilding house in exchange for labor (Arma-Parma) and saving cost	WM1, WM3, WM7
Getting social acceptance and setting examples	WM1, WM7
Equal pay and job opportunities	WM1, WM4, MM1, MM4, MO1, LGR2

A. Factors encouraging participation of women in the Housing Reconstruction in Earthquake-affected Areas

Need and Desire to Make Earthquake Resilient House

During the interview with women masons, one common reason found was all of them have lost their house during the Earthquake. One of the woman masons shared that, “Our three-story house, which was made of stone and mud, completely collapsed to the ground. In that one moment, our whole house and our shop with it was torn down. We started to live in our shed that was behind the house” (WM2). The other woman Mason also shared their story, “The top of my house was destroyed by the first earthquake on Baisakh 12th. We started staying outside the house afterwards fearing it would happen again. The earthquake on 29th Baisakh destroyed my house completely” (WM3).

The Loss of home has triggered the importance of housing reconstruction to women in those earthquakes rural areas, and they want to learn the skill to build their own house, as stated by one of the interviewees “My only focus was on how to build one small house for my family...(WM1)”. Another woman Mason shared, “We lost our food and peace for many days

after that... The biggest harm for us was that it made us homeless (Socio-Eco, homelessness, housing damaged” (WM5).

However, they were equally interested in gaining the skill, as one of the woman masons shared, “My purpose for the training was to learn the skill, gain experience, and build a strong earthquake-resistant house for my family” (WM6). The other women mason also shared the same, “We women went to the ward office and requested them to provide training for women as well because women must learn this skill. Which can help many single women in society make a living and feed their kids” (WM7).

The housing destruction and need for rebuilding was one of the major socioeconomic factors that encouraged women to enroll in mason training which is traditionally considered a manly work.

During the earthquake as most of the houses collapsed, people also suffered food loss and livelihood loss, as mentioned in one of the interviewees, “My parents had a grocery store, but we all feared going inside the house, a lot of food and grains from that shop were wasted at that time” (WM1).

People also suffered several other crises during the earthquake, such as a lack of shelter. One of the interviewees mentioned that her daughter got a snakebite in the temporary shelter. This woman Mason was a widow, and she shared her frustration during the reconstruction before she enrolled in the training, “I was so frustrated seeing everyone reconstructing their houses. I neither had money nor manpower in my house, I used to cry all night worrying and being anxious” (WM1).

Lack of Manpower

In Nepal, going abroad for work and study is a common trait nowadays. In rural areas, most of the male family members go abroad for work, especially in Middle Eastern countries, and women take care of households, the elderly, and children as well as the agricultural responsibility. During reconstruction, women stepped into the construction training due to a lack of male counterparts to fulfill the need for manpower in the field, One of the Municipality Officers mentioned that “...due to the lack of competent manpower at the local level for RCC, we had to call the manpower from outside” (LGR2). The other Municipal Officer stated, “The other reason why we had to train women was the lack of manpower. Mostly the youths tend to go abroad for employment. The manpower gap that the immigration left had to be filled by women” (MO1).

B. Challenges Women Masons Faced while Working in the Construction Sector

There are several good practices and success stories we learn in the above sub-chapters, however, still there are challenges for women to continue the masonry work, in this subsection we will discuss the challenges women masons faced during the initial period of their job and after the reconstruction to continue the masonry work.

Household Responsibilities:

During the reconstruction also women mason had to complete her household responsibilities and join the masonry work. This adds double responsibility to a woman's lap. I would like to quote the experience of women masons and how they managed household chores simultaneously with masonry jobs here, one of the women masons shared, "It's very hard for women to work compared to men. I used to wake up at 4 in the morning. Do the household tasks and go to work at 9. I used to work from 10 to 5. And on Saturdays, I used to work on my farm. In the remaining free time, I used to sew clothes for my family" (WM1). Another woman Mason shared, "I wake up early. At about 4 am, I finished all the household chores. I also clean the shed and feed my pets before I get to the farm. I work on the farm for a while and then get back home" (WM2). She further added that she is no longer working as a mason these days because, "My husband doesn't help me with the household tasks, so I have to stay at home and look after everything" (WM2).

Another woman Mason shared that, "I used to wake up early and finish my household chores before going to work and do the remaining in the evening after coming back from work" (WM5). While asking about continuation share further added, "Now my kids have started going to school. If I keep on going to work, they must look after the household chores and that will distract them from their studies. There's nothing greater than education currently. So, to let them concentrate on their studies, I stopped working as a mason" (WM5).

Patriarchal Mindset

Women masons who have worked extensively during reconstruction shared that after the government officially concluded reconstruction, how hard it was to get a job for women masons, "I have worked on so many projects as a mason. But still, there's a huge difference. We experienced female masons at home, unemployed. However, the male masons are getting work. People say everything has changed, but I can tell you people still don't believe in women's potential" (WM1). She further added, how hard it is for women to work beyond their community and together with other men than their family members, "... being a woman,

if you work as a mason with other male contractors, we always have to be alert about our safety. We keep feeling unsafe at work. We are always concerned and feel insecure about what society will think watching us work alone with other men. It becomes easier for us if even one more woman is working on the site. That's one reason why I'm backing off from going to work without thinking twice. The fear of what society will think is instilled in us... lack of awareness is one big problem the government needs to draw its attention to" (WM1). Additionally, she shared that lack of family support and lack of awareness are major factors for the patriarchal mindset.

One of the masons had such a bad experience of discrimination on the payment as she shared, "There was no discrimination between men and women in Mason as far as I had noticed. Everyone was welcoming to me. But there was one homeowner I worked for, who refused to pay me equal to male masons. He paid me Rs.800 per day whereas he paid men masons Rs.1200. At that moment I felt a little disappointed" (WM2). This incident shows that it takes time and long-term action to change the patriarchal mindset which is not accepting women as capable as men.

One of the male masons turned contractors also shared, "I have seen senior male masons prioritize male masons to work and keep women, masons, only as helpers even if they are trained and certified. Which in turn decreases their wages" (MM1). Another house owner shared his thoughts, "I wish women would come forward and work equally as men. Which they can and they have. The mentality here is women shouldn't step out of the house to work for the earning. That's something only men can do, which needs to change" (HO1).

While asking a male mason turned contractor why there is a smaller number of women masons in the field, he shared his thought "I think that is because of their family. Most people don't believe in women's capabilities that's why they don't let the women in their families come forward to work" (MM3). The Representative of the Local Government also shared his thoughts on this question, "Both men and women were equally included and trained, however we could see more men compared to women at work sites. Mostly in our society, there is a tendency for men to look after outside work and women to take care of the household" (LGR2).

C. Socioeconomic Impacts of Women Masons Received by Masonry Skill.

Breaking the Barrier: Rebuilding Houses and Gaining Self-Confidence

Masonry work has been considered as men's job; hence society has never expected women

to work as masons before the earthquake in rural Nepal. Interestingly, the 2015 earthquake proved that disaster brings opportunities, as stated by the Municipal official interviewee, “a crisis brings an opportunity in society, the women who used to work as laborers began to assist the masons. They started showing interest in working as masons after the crisis” (MO1).

The training helped boost the confidence level of women masons, they gained faith in themselves and some of them worked intensively during the reconstruction as one of the women masons shared, “I learned that if women try to do something, nothing is impossible” (WM4).

Another woman Mason shared, “I have never fallen back from a task considering it can only be done by men... I worked on around 30 houses” (WM1). This is so encouraging to hear that they have come so far with the practice of safe construction and have done the same level and volume of work as men are doing. Another trained woman mason replied when asked how many houses she has constructed after training, “I don’t remember the exact number. However, it was around 60 or 70” (WM3).

Gaining Financial Independence

Financial independence is a crucial factor to empowerment for women which not only helps women herself, but also to family and communities. Financial independence gives women the power of decision-making and freedom of choice. A few of the Interviewees have shared their story on this, “...Later, I started getting offers for work, so I started working for money as well... I earned quite well in the reconstruction project. It was enough to feed my family, educate my kids, and manage the household” (WM1).

Another interviewee shared her story “I took a job as a helper at a construction site. At first, I carried gravel for two months. I was earning almost NRS 1500 per day. I started repaying my debt. Then my husband and I took training to become masons together. After the training, I worked as a mason for three years. We built our house together” (WM2). She added further, “Women being self-sufficient is very important. They don’t have to depend on someone else financially. It’s very helpful for educating their kids and looking after the family. It gives the feeling of satisfaction and that matters the most” (WM2).

One of the interviewees shared how it was helpful to fulfill personal and household requirements by self-earning, “ I used to earn around 14 to 15 thousand per house by working as a mason. I spent it on household needs and my personal needs” (WM4).

One of the women mason also added that after years of experience in reconstruction, she has also got job opportunities from the government, Nepal Reconstruction Authority

under the Central-Level Project Implementation unit, “Later I also worked for 17 months on a reconstruction project in Dolakha. The municipality had sent us to work on the reconstruction of houses of people belonging to vulnerable groups” (WM1). Such a job opportunity helped fulfill her financial needs.

Rebuilding House in Exchange for Labor (Arma-Parma) and Saving Cost.

In rural areas where agriculture is the mainstream work, exchanging labor for planting, harvesting, etc. is an ancient practice in Nepal. During reconstruction, people used this ancient practice to rebuild their housing within the community. Terms of women masons were also used to exchange their masonry skills for the sake of reconstructing their housing. This is also helpful to single women mason who shared, “I had no money to pay workers for the construction of my house, so in return, I went to the construction of their houses and worked as a mason for free” (WM1). The other woman Mason also shared, “The house would have cost us a lot more if we hadn’t been trained and could exchange our labor. We exchanged labor for each other in our community to build houses of each other” (WM3).

Similarly, a story shared by a woman Mason, “After the training, we arranged to construct all the houses in the community. We all agreed to build our houses on our own. Since all the men and women in the community were trained, we built our houses together. We didn’t spend any money on the workers. It was labor for labor exchange. We constructed exchanging our knowledge and skills between men and women” (WM7). d)Getting social acceptance and setting examples.

Women venturing into the masonry work was not easy at the start, there was disbelief in society that “Masonry work is men’s job”, “Women are weak and cannot do it”, or “women should only do household chores” etc. However, at the beginning of reconstruction, several socio-economic aspects encouraged women to enroll in the training, women proved themselves by showing confidence and skill in equal and sometimes even better ways while doing construction work. One of the women masons shared her experience, “At first, they used to behave with women differently, which means: ignoring women and their work, and not appreciating them equally like men. Even in training sessions, the training instructors used to focus on “men”- considering men always being superior to women. But later, when they saw my determination, they appreciated me even more” (WM1). She added further, “People used to come to training to see my work. And when I was working on my first project after the training, one homeowner was impressed by my work and told me to work on the construction of his house too” (WM1).

How helpful training could be to change the mindset of the community and boost the confidence in women has shown during the study, as shared by one of the women masons, "... but I assisted in the construction of my own house and broke such stereotypes as I want to learn the skill and build my home myself..." (WM7).

Equal Pay and Job Opportunities

Nepal's Constitution discourages any such discrimination, though in practice "equal pay for equal work" has not been materialized not only in Nepal but worldwide. However, the seven women masons interviewed during this study, interestingly shared that no one has experienced such discrimination on payment. On this, one of the interviewees shared, "I never had to witness such a difference in treatment from any homeowner. They all treated me and paid me equal to men"(WM1).

Another woman mason shared, "Wage is equal for both male and female masons in our community though we have heard there's less pay for female masons than male masons in some places" (WM4). Her statement shows there is still discrimination in other places when her community practices equal pay.

During the Key informant interview with a male mason, he shared a similar practice, "Now since they are trained equally like male masons, there's no difference in wages between men and women. They are paid equally. Before they were not trained as masons, they only used to work as helpers on construction sites, their wages were low compared to male masons. But now there's equality in wages as they are certified, trained, and skilled" (MM1). Another male mason also stated that "Wages were equal for all masons" (MM4).

The municipal officer also shared - "Before (the mason) training, there was a clear difference in the wage of male and female masons. However, after being trained, women started to claim equal pay amounts for equal work. And now, society has accepted equality in wages" (MO1). One of the Local Government Representatives also shared the same experience, "The wages given to men and women are the same" (LGR2).

CONCLUSIONS

The study revealed that housing damage was a major socio-economic factor that encouraged women to join the masonry training. Some of these women had a prior history of working as laborers in the construction sector. Another major factor is the lack of skilled manpower during the earthquake reconstruction period. Financial needs to fulfill the daily household

requirements during the post-earthquake difficult time were among the factors that encouraged women to join the masonry work. The trainee women faced the challenge of completing household responsibilities even during the training periods while also being involved as masonry workers, the added workload was a great physical and emotional stressor. The patriarchal mindset prevailing in the society was another challenge on top of everything that women had faced while getting jobs and continuing the masonry work to top up their income source.

Women Mason, however, did overcome the difficulties of facing the challenges and breaking the traditional stereotype mindset of the community during the reconstruction of the 2015 Earthquake. The reconstruction brought many opportunities to the women one of them can be seen through the experience of women masons. They built their own houses and supported the community to rebuild houses in exchange for labor. It helped women to gain self-confidence and financial independence. During the reconstruction women masons could get equal pay together with their male counterparts because of formal stipulations, nonetheless, it was a great change for everybody. Women stepping into masonry work helped them to set an example and get social acceptance too. It also helped to create job opportunities for women during the reconstruction period. The financial position improved. They are excited about this new job which yielded equal earnings to male masons. This situation could further encourage them to own property in their name which could help women to create more social value at home and in society.

REFERENCES

- Ariyabandu, M. M. (2006). Gender issues in recovery from the December 2004 Indian Ocean Tsunami: The case of Sri Lanka. (S3) *Earthquake Spectra*, 22. doi:10.1193/1.2204838.
- CBS (2019). *Report on the Nepal labour force survey 2017/2018*. Central Bureau of Statistics, Government of Nepal.
- Dixit, A. M. (2004). *Promoting safer building construction in Nepal*. Paper presented at the 13th world conference on earthquake engineering, Canada.
- HRRP. (2018). *Women in reconstruction research report. housing recovery and rehabilitation platform (HRRP)*. Kathmandu
- Hemachandra, D. A. (2020). Factors affecting the women's empowerment in disaster risk governance structure in Sri Lanka. *International Journal of Disaster Risk Reduction*, 51. doi: <https://doi.org/10.1016/j.ijdr.2020.101779>

- MOHA. (2015). *Nepal disaster report*. Ministry of Home Affairs, Government of Nepal.
- NPC. (2020). *The Fifteenth plan*. National Planning Commission, Government of Nepal.
- NRA. (2021). *Rebuilding Nepal: A National Reconstruction Authority Publication. Feb-Mar 2021*. Government of Nepal, National Reconstruction Authority.
- Shrestha, S. N., & Dixit, A.M. (2008). *A hierarchical system for training and awareness Raising at grassroots level: Experiences of NSET from earthquake-resistant housing reconstruction in Pakistan*. Paper presented at the 14th World Conference on Earthquake Engineering, Beijing.
- UN. (2000). *Resolution adopted by the general assembly*. United Nations. United Nations. Retrieved from <chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://documents-dds-ny.un.org/doc/UNDOC/GEN/N00/651/99/PDF/N0065199>.