

# CHAPTER I

## INTRODUCTION

### 1.1 Background

Among the various issues of global concern generated after world war II development has occupied a prime position in both the western as well as the oriental society. Development today is defined as the creation and organization of social and economic reason us so as to allow people to take control of them lives. But until the late 1960s development was defined in terms of economics growth and a rose in the gross national product (GNP). But the exercise in various countries showed that a growth in the economy and an increase in the GDP didn't necessarily imply the elimination of poverty, discrimination and exploration. Therefore, it has become a generally accepted view among development workers today that beside economic development has to be also concerned with the problem of reducing inequalities between various sections of society partially their access to resources necessary for the fulfillment of base needs and the strengthening of self-reliance (Shrestha and Hachhethu 2002).

In the context of this broad aim of development the issue of role and contribution of women becomes a crucial one. Women and development as a subject entered the international stage around 1970 when the hidden economic and social contribution of women began to be uncovered from the under layers of social mythology. The declaration of the international year of women by the UN general assembly 1975 could be considered a turning point in the history of current nations of the place and role and position of women in society at the international level. In the developing countries handful of professional women are beginning to influence the development process. The term professional here indicate to the women who have earned by using their knowledge and skill. There women are trained in different technical field and actively participate in politics social works and many more (Ibid).

Many agencies and organizations have made intense efforts in brining the women out of their household by providing them various opportunities for improvement of their status. As a result, we have seen numerous inspiring successes; however the picture vs stall disheartening as it takes far more than change in low or stated policy to change

practices in the home. Community and in decision making environment. Comparatively developed countries able to achieve more than developing.

Nepal is an agriculture based country. 65 percent are involving in Agriculture. More labor contributes in agriculture are female, 71 percent are involved in such activities. They contribute to more than half of the labor forces but still they are suffering from various problems. They are still considered to be the second class citizens of the nations having very little or negligible role in decision making in public and private sector (Ibid).

Empowerment is an effective approach to uplift the condition of women in Nepal, hence the non-governmental organizations NGOs are focusing on programs which helps women in empowerment. Women's empowerment, as defined by a group of women activists in South Asia. Means, a process where in the powerless and disempowered gain a greater share of control over resources and decision making." Even more specifically, it is "the process by which women gain greater control over material and intellectual resources, and challenge the ideology of patriarchy and gender based discrimination against women in all institutions and structures of society" (Ibid).

Acharya (1997) defines "empowerment is a process, which enables women to meet both their particle as well as strategic needs. Practical needs relate to immediate problems such as poverty, water health. There needs may be meeting to a certain extent with the existing social structures without challenging the ingrained power relationships. Meeting strategic needs. like access to property and wealth, changing the division of labor and the system of unequal wages, and giving control over their own bodies, on the other hand, is challenging the existing structure of oppression".

For development, women empowerment has become more important and worldwide phenomenon. Various programs and conferences are being held to meet the demand of the women especially in the developing countries. The fourth world conference on women held in Beijing (on 4-15 September 1995) stated "The empowerment and autonomy of women and the improvements of women's social, economic and political status is essential for the achievement of both transparent and accountable government and administration and sustainable development in all area of life."

This initiation of women has been supported by the governmental organizations (GOs) and Non-governmental organizations (NGOs) and International organizations. Further it has helped in strengthening the capacity building and awareness-raising of women by intervention in education, Skill, training, income-generating activities, sensitization activities and creating the opportunities for employment. However, there is a distinct gap between the state's proclaimed goal of gender mainstreaming and women's empowerment; and its policy and programs that are overburdened by WID principles and the welfare approach (Ibid).

Construction sector is an integral part of a country's infrastructure and industrial development. It is the world's largest industrial employer with seven per cent of total world employment and 28 percent of industrial employment (Improving Working and Living Conditions in Construction, 2004). It is thus the only means to bring physical development at community.

Globally, the construction industry has been controlled by construction workers, who are overwhelmingly male. A sustained gender imbalance is prevalent in the construction industry of the world with a dominating population of females over the males. The low percentage of women participation in construction work is driven by discrimination that starts in education programs and continue all the way up the employment chain.

The highly expanding construction industry thus needs to be expanded to a limit to include the currently marginalized female population. Empowerment allows individuals to reach their full potential, to improve their political and social participation, and to believe in their own capabilities. Gender equity thus can be promoted through this empowerment.

The issue of women involvement in construction industry is not only limited to training and educating women in construction activities but also in attraction and retention of female employees. Professional discrimination on the basis of gender in construction sector of Nepal too is high. Countable number of women are involved in construction activities. They are limited to simple labor works rather than coming to the construction forefront as the lead masons.

## 1.2 Statement of the Problems

Although much progress has been made in the lives of women since the 1960s with the women's movement receiving additional momentum following the first world conference on women in 1975, gender inequality still persists in many areas of women's lives. Women's subordination remains widespread and deep world-wide, women have limited access to resources. They do more than 60 percent of the hours of work done in the world, but they get 10 percent of world's income and 1 percent of the world's property. Despite the fact that much progress has been attained in the field of education, women still comprise two thirds of all the illiterate people of the world. Maternal mortality rate is still very high, particularly in developing countries. Poverty, to a significant extent, has a females face. One fifth of the world populations live under absolute poverty. A majority among them are women. In some countries women fulfill nearly half of the labor force. Women's economic involvement is increasing with paid jobs for women are becoming the new force in the developed countries. The developing countries are following the some trace. However, most women remain in low-paying and semi-skilled jobs. Very few women work at decision-making levels (Curtis, 2003).

Nepal is one of the under developed country in the world. Out of 26.49 million population 51.5 percent are women with literacy rate 57 percent whereas male literacy rate is 75 percent (2011, CBS). In spite of more than half of total population , women are economically, socially and politically backward in Nepal. The majority of women are involved in agriculture, personal and community services where income generation is comparatively low.

The concept of women in construction industries seem lucrative and powerful. But in real ground the number of women being part of construction work is very low and countable. They are mostly engaged in the most simple labor works like shifting sand, carrying bricks, and crushing rocks into smaller stones (making aggregates). Also, the women working in construction works are low paid.

Nepal is entering to a higher level of physical infrastructural construction at city areas as well as rural areas while after the earthquake large number of infrastructural

development is also needed in the thirty one affected districts, fourteen of them being most affected and most of them being the rural areas.

Post Disaster Needs Assessment (PDNA), which was completed in June 2015 after the 2015 Gorkha earthquake, found that total damages and losses amounted to about US\$7 billion, with reconstruction needs of about US\$ 6.7 billion. As the earthquake sequence destroyed 4,90,000 houses mostly traditional mud brick and mud stone houses built and occupied by the rural poor and rendered another 2,65,000 houses at least temporarily uninhabitable, the largest single need identified in the PDNA was housing and human settlements, accounting for US\$3.27 billion or almost half of the total reconstruction needs. The figures after the resurvey and grievances addressable has increased to a figure beyond 6,00,000. It is assumed that 60,000 trained masons are required to reconstruct these only houses during the three year period, no figure yet has been calculated for the other infrastructural reconstructions.

Based on PDNA, the housing reconstruction strategy has been adopted as Owner Driven Reconstruction. PDNA also specifies that 26 percent of the damaged homes were women-headed households. This large scale destruction, limited time frame and the reconstruction strategy thus opts for active involvement of women in reconstruction activities.

It is this background, that is the present study was conceived of and entitled as empowerment of women through mason training in post-earthquake reconstruction, A case study of Sangachowk village.

The aim of this study therefore was to elucidate and explore the role of women in reconstruction, and identify the barriers that exist in society for the dignified involvement of women in construction work as mason.

The study has been carried out to answer the following research questions:

1. What are the things that motivate women to be a part of construction industry as masons or contractor?
2. What will be the social and economic impact of women empowerment in construction sector?
3. Why women construction workers should be empowered to become masons?

4. What are the constraints that may prevent women from becoming skilled workforce for construction works in long run?

### **1.3 Objectives of the Study**

The general objective of this research is to know impact of mason training on empowerment of women. The specific objectives of the study are as follows:

1. To find out the motivation and demotivation factors for women to be involved in construction works.
2. To assess the details of social and economic empowerment of women involved in construction as masons.
3. To explore strategies to retain and encourage active participation of women masons beyond reconstruction phase.

### **1.4 Importance of the Study**

Women should empower to take the decision for their life because women are the part of the human resource. As human beings women have not only right but of is also their duty to participate in the development activities of their country. They contribute to more than half of the population of the country, therefore, empowerment of women is pre-requisite for mainstreaming gender balance in the development.

One of the main issues in the rationale for this study is the opportunity to study the role of women in reconstruction after the massive earthquake and women empowerment with equity. Reconstruction is also an opportunity for social reconstruction, to build a society where women's needs are addressed and they can contribute for Nepal's overall development.

There are many studies on construction sector which recommend that women could be empowered by training to do the tasks of masons but there are very few studies in Nepal that indicate what is being barrier for the dignified involvement of women.

So, the study has explored motivation for women in construction work as mason and barrier that are playing vital role for their dignified involvement in mason profession and other reconstruction related profession. The study has also explored the socio economic empowerment of women involved or interested in the mason work on the

reconstruction phase. The study also explored the possible strategies that would help to retain and involve women in reconstruction work.

The study would be helpful for the line agencies (National Reconstruction Authority, Department of Urban Development and Building Construction Division, I/NGOs) related to the reconstruction after disaster.

### **1.5 Limitations of the Study**

The primary limitation of this study is that it focused on women as mason in construction activities in Sindhupalchok district. It was focused to find out the opportunities created by this employment and barriers in it. The report solely based on the answer given by the respondents and the secondary data collected. So the result may not be absolutely representative and it may not represent the exact scenario of the whole Nepal.

Due to limited time and budget constraint the research could not be carried out in a very rigorous way. The study carried out in a single ward of earthquake affected municipality of Chautarasangachowkgadhi, so it may not be able to reflect all scenario of the women empowerment. Also, the study was a new issue of empowerment so relevant article and other synthesis on the topic are limited.

The study is limited to the analysis of data obtained from the primary sources (questionnaire interview) with the related people from specified area and the secondary information taken from the related line agencies and different online sources.

### **1.6 Organization of the Study**

The Study has been divided into five different chapters and units and sub units. The Introductory part covers background of the study, statement of the problem, objective of the study, importance of the study, limitation of the study and organization of the study in chronological order.

Similarly, the second chapter focused on relevant literature of women empowerment and empowerment of women through mason training on post-earthquake situation. It also covers review literature on limitation that are creating hurdle for women to be in

hardcore mason profession. In this chapter global, national as well as international and local literature article related to women were reviewed cited and ordered.

In third chapter different methodology used on this research are explained. On this chapter rational behind the selection of the study area, method of research design and different qualitative and quantitate data sources as well as tool and techniques of data collection, procedure of data analysis and processing are explained in a brief manner.

Fourth chapter consists of analysis and interpretation of survey data. The last chapter consists of conclusion of the research with finding and recommendations. The reference and appendixes also included in last section of the thesis.



## **CHAPTER II**

### **LITERATURE REVIEW**

For any kind of research study, literature review has played a vital role to complete research work so secondary data are collected from literature review and secondary sources are the main pre-requisite. Following the same tradition, relevant literature have been theoretically reviewed which is presented as follows:

#### **2.1 Women Empowerment**

Development is a central issue facing many countries in the third world today in today's 'globalize economy' there are greater disparities emerging between the developed and developing countries, from individual opportunities such as education and employment, health condition and life expectancy, and the marked difference in the standard of living. Within developing countries women are suffering greater than man. As international agencies, non government organization (NGOs) and government organizations (GOs) attempt to address gender disparities in their development agendas, there is a need to move beyond mere rhetoric of 'equality' and 'empowerment' and incorporate measures that allow women and girls to actively and equally participate in decision making and other processes that affect and shape their own lives. In Nepal as in many other developing countries, women's subordination is a fact and discrimination from the local, national and international level continues to hamper their status in society. As such, unless women are empowered, development goals will never be attained (Curtis, 2003).

The past three decades have witnessed a steadily increasing awareness at the need to empower women through measures to increase social, economic and political equity, and broader access to fundamental human rights improvement in nutrition basic health and education. Along with awareness of the subordinate status of women has come the concept of gender as an overarching socio-cultural variables, seen in relation to other factors, such as race, class, age and ethnicity (WEF, 2005).

Empowerment as the movement from an inability to an ability to make choices. It is a process of developing the capacity to have a political leverage to correct grossly unfair decisions regarding the allocation of development resources and distribution of the ensuing benefits, and to acquire a necessary base of a sustainable livelihood on which to build and create for the future (Kabeer, 1999).

Huq (1996:16) identifies equity, sustainability, productivity, and empowerment as four essential components in the human development paradigm. There is also a realization today, that if there is economic progress due to technological advancement in the midst of horrendous poverty and unacceptable levels of inequality, the remedy lies not in more growth but in finding a way for everyone to share the fruits of growth in a civilized manner (Ambirajan, 2000).

## **2.2 Women's Involvement and Development**

Although it has many possibility Nepal is also listed in the list of developing country where poverty is a part of life for many people. The UNDP estimates poverty at 37.7% get cautions that these figures "fail to convey the depth and severity of poverty throughout the country" where large segments of prorate "hardcore poor" we got these several title because of ignoring women in developing activities. In all sectors like policy making, leadership benefit showing, development activities each and every place we bycute the women thinking that they are unable. It has been found that the term gender refers to the rules, norms, customs and practices by which biological differences between males and females are translated into socially constructed differences between men and women, boys and girls. This results in two gender being valued differently and in their having unequal opportunities and life chances. A gender perspective means recognizing that women stand at the crossroad between production and reproduction, between economic activities and care of human beings, and therefore between economic growth and human development.

Gender inequality can be contracted only if the women are provided with education and other income generating trainings and skills to earn their livelihood. Engineering Development suggests some positive actions that a state can take to reduced the gender discrimination that causes harm to society as a whole. It can "tax" and subsidies, pursue and regulate, prohibit and punish or provide services. It can directly prohibit prejudicial behaviors such as when it requires enterprises to hire workers on the basis of skills rather than on the basis of sex and sanction tines violations (Kabeer, 2000).

The French revolution in 1789 made aware of women aware for their rights as an equally important human beings (women) and questioned" 'what about women' then

the different scholars have made contribution in development of new concept of feminism. The feminism raised its against the general norms of society in mid 60's in the western world which was meant for the upliftment of the women and their voice for the rights and inclusion of women in public area. This was effective after the world organizations introduced an international developmental approach to include women in the developmental fields. This made the national and international organizations aware about the empowerment and encourage them to do something without which the real development was out of reach.

## **2.3 International Case Studies**

While reviewing literature, cases of different countries which had faced earthquake and how they managed it were studied.

### **2.3.1 Pakistan Earthquake 2005**

The October 2005 earthquake in Pakistan killed over 73,000 people and left more than 2.8 million in need of shelter. In response the Government of Pakistan, in collaboration with international partners, launched the Rural Housing Reconstruction Program (RHRP). The RHRP relied on an owner-driven mechanism providing multi tranche financial support to beneficiary households, based on assistance, inspection, and certification at various stages of construction to ensure compliance with seismic resistant standards.

The large scale devastation caused by the 2005 earthquake provided a window of opportunity to improve the prevalent methods and quality of construction. The reconstruction and repair of around 6,00,000 houses in scattered rural communities across a difficult mountainous terrain to seismic-resistant standards required a vast adequately skilled and trained workforce.

Thus, during Program implementation, a 'Cascaded Training Regime' was implemented throughout the affected area to create a critical mass of artisans, masons, craftsmen, and construction workers skilled in seismic-resistant construction methods, and ensure that affected homeowners and communities were well informed about it. The Cascade was envisaged to provide training to master trainers, who would in turn train the technical staff of Partner Organizations (POs) as field trainers, who would then train artisans, masons, craftsmen and the affected population in the widely scattered communities of the affected area. Included in this was the construction of model houses.

### Activities

1. Women safeguarded by ERRA (Earthquake Reconstruction and Rehabilitation Assessment) to receive financial assistance in housing and land programs including property ownership.
2. Specific programs of training and awareness for women, including policies and construction standards.
3. Village reconstruction committees including women representatives or with women and men's committees
4. Women staff employed by all partner organizations to ensure full engagement with women in all activities.
5. Program of building improvements for reconstruction including sanitation, rain water management and fuel efficiency, designed and implemented targeting women.
6. Additional technical support by partner organizations for women-headed households to manage reconstruction.

### Results

1. Approximately 55,000 houses reconstructed by women headed households including those where male family members had migrated for work.
2. Over 300 women employed as trainers and community organizers activities in the housing reconstruction program.
3. Over 1300 village reconstruction committees with women representatives
4. Over 2,00,000 women participated in training, awareness and community mobilization activities.
5. Fuel efficiency programs reduced cooking time and fuel consumption by 30-50 percent.
6. ERRA housing program impact evaluation study showed the greatest change after risk reduction was an improvement in the perception and empowerment of women in the family and community

The Challenges of Reconstruction after the October 2005 Kashmir Earthquake, Mumtaz, Habib Mughal, Stephenson, Bothara (2005) discusses the challenges of reconstruction the 8<sup>th</sup> October 2005 Kashmir Earthquake, the policy directives and strategy to tackle the challenges, the tools devised for awareness raising, the experience of reconstruction, and the impediments.

As females are a large part of society, are more conscious about their family's safety, and often live at home most of the time, special orientation programs on construction were conducted for them. In the disaster area, many males are away from home for work reasons. Many females supervise their house construction, and those who do not supervise at least have interaction with the artisans when providing them with lunch and tea.

It was predicted that the reconstruction effort would require some 60,000 skilled manpower that included engineers, foremen, masons, and carpenters and another 80,000 unskilled workers. Developing manpower on this scale is in itself a mammoth task. The World Bank's Damage and Needs Assessment in 2005 estimated that only 20 percent of the needs could be met from within Pakistan. Therefore, the phenomenon of migrant labor and the need to also train and inform them was identified from a very early stage

It has been observed that women are more dedicated, responsible and sensitive to achieving quality construction. In a few places, masons were complaining that they interfere with their work. This means that these women were committed to see what they had learned implemented in their houses.

### **2.3.2 Haiti Earthquake, 2010**

Haiti Earthquake Reconstruction, GFDRR states, Post disaster reconstruction help establishing long term opportunities for women and communities. The promotion of gender equity can often be addressed easily and speedily in the recovery process. Post disaster situations can be opportunities to empower women at the grassroots level, build more resilient communities, and initiate long-term social change and development.

Women have often been active leaders in rebuilding their communities after disasters. They take the initiative in calling grassroots community meetings and organizing disaster response and recovery coalitions. After the earthquake in Maharashtra, India, a local non-governmental organization negotiated with the government to secure the appointment of women as communication intermediaries, placing them at the center of the reconstruction process. The women's groups underwent training to build technical capacity and monitor reconstruction. Over time, they became community development intermediaries.

## **2.4 Key actors in Nepalese Construction Practice**

Many buildings in Nepal are produced at the guidance and with the involvement of head mason or a petty contractor as key actors till now. House owners themselves are involved in the construction right from the beginning to the end. This construction is mostly informal construction. Basically, the building owner himself manages the project and procures the materials. The leader craftsman plays a pivotal role in the building development process by helping the building owner in various ways such as quantity estimates, time estimates, providing advice (Marhatta,2007). A large majority of houses in Nepal are non-engineered and constructed by owners themselves through the non-formal sector. In rural and semi-rural areas, where there is no building permit system or compliance mechanism, local artisans provide all the necessary technical and management support for construction, with the house owners' family pitching in with labor. In the urban areas, the role of the house owner changes to managing construction materials and labor, and the whole construction process requires a much larger cash flow. Construction in urban areas involves petty contractors and, sometimes, engineers and architects. Municipal areas have mandated building permit and compliance systems (UNDP, 2015).

## **2.5 Post-Earthquake Reconstruction Scenario**

Post-Disaster Needs Assessment (PDNA) which was conducted by NPC (National Planning Commission) completed in June 2015, found that total damages and losses amounted to about US\$7 billion, with reconstruction needs of about US\$6.7 billion. Post Disaster Needs Assessment has been developed as the guiding tool providing the details on detailed damages and needs of each sector. As the earthquake sequence destroyed 4,90,000 houses - mostly traditional mud-brick and mud-stone houses built and occupied by the rural poor - and rendered another 2,65,000 houses at least temporarily uninhabitable, the largest single need identified in the PDNA was housing and human settlements, accounting for US\$3.27 billion or almost half of the total reconstruction needs.

It states that the large scale destruction of housing resulted primarily from the seismic vulnerability of un-reinforced masonry houses that predominate throughout the country from the Gorkha Earthquake. Most houses (58 percent of all housing construction) are low strength masonry stone or brick masonry with mud mortar,

without seismic-resilient features. Other common building types such as cement-mortared masonry and reinforced concrete frame buildings were somewhat better off but still suffered significantly due to deficiencies in material, design, detailing and craftsmanship. Amongst the overall needs defined are:

1. A disaster resilient core house for those households whose homes are fully damaged.
2. Training, facilitation and quality assurance for owner-driven reconstruction.

The PDNA estimated the costs for housing reconstruction and the associated Technical Assistance (TA) as follows:

1. Housing reconstruction, repair and retrofitting, 2700 million US\$ over 5 years, 2015 - 2020.
2. Associated TA: (planning for reconstruction, training and quality assurance), 140 million US\$ over 3 years, 2015 - 2018.

The “Associated TA” includes training and decentralized technical outreach, designed to ensure that all affected households have access to the information and support required to reconstruct in an improved manner. The 140 million US\$ estimated to be required in the PDNA represents 5 percentage of the total estimated costs of housing reconstruction, repair, and retrofit. For the reconstruction alone, 60,000 trained masons have been estimated for safer reconstruction.

### **2.5.1 The Post-Disaster Recovery Framework (PDRF)**

PDRF has been prepared under the leadership of the NRA, in consultation with key stakeholders, to provide a systematic, structured and prioritized framework for implementing recovery and reconstruction. It is a common framework meant to serve all of government, as well as national and international partners and other recovery stakeholders, including the affected population. The PDRF lays out strategic recovery objectives and summarizes in an integrated manner the policy decisions, institutional arrangements, financing, and financial management strategies, as well as implementation and monitoring systems that are being put in place to plan and manage recovery and reconstruction. It also sets out sector priorities that will contribute to the achievement of the strategic recovery objectives.

The Recovery Vision of the Government of Nepal is establishment of well-planned, resilient settlements and a prosperous society. The guidelines for recovery and

reconstruction established the initial goal of maintaining the spirit of national unity, harmony and resilience experienced during rescue, relief and search operations after the earthquake. Utilizing the capacity and skill of the Nepalese people to a maximum degree in planning and implementing reconstruction is also part of this vision. The guidelines addressed the resettlement as "relocation of villages will be avoided or kept to a minimum, while respecting local livelihoods, culture and traditions. Traditions include maintaining familiar land use patterns in relocated villages so that people's traditional ways of making a living can still prosper."

#### Strategic Recovery Objectives

1. To reconstruct, retrofit and restore partially and completely-damaged residential, community and government buildings and heritage sites, to make them disaster resistant using local technologies as needed.
2. To reconstruct damaged cities and ancient villages to their original form, while improving the resilience of the structures.
3. To build resilience among people and communities at risk in the earthquake affected districts.
4. To develop new opportunities by revitalizing the productive sector for economic opportunities and livelihoods.
5. To study and research the science of earthquakes, their impact including damages and effects, and post-earthquake recovery, including reconstruction, resettlement, rehabilitation and disaster risk reduction and
6. To resettle the affected communities by identifying appropriate sites.

The Implementation Approaches also Clearly Identifies and Addresses the Resettlement Dynamics:

1. Owner-driven reconstruction
2. Relocation of villages
3. Integrated habitat approach
4. Urban reconstruction to improve cultural or historical settlements
5. Application of building codes and disaster risk reduction measures
6. Cash transfers
7. Livelihoods support
8. Community outreach
9. Social inclusion



10. Capacity building

11. Environmental and social safeguards

### **2.5.2 Guidelines for Training Delivery and Management**

Guidelines for training delivery and management for reconstruction of earthquake affected building, NRA 2016 has been prepared in order to regulate the training activities for the Reconstruction of Earthquake affected buildings. The guideline not only refers to construction works, but also refers to all types of training activities related to housing reconstruction. It basically outlines the scope, objective of the guideline to standardize and manage the training activities and outlines the procedure and requirements for agencies to conduct training, along with specific instructions for bringing the uniformity on the curriculum, training delivery and services.

Based on the PDNA and PDRF, it estimates that there will be need of about 60,000 trained artisans (masons and carpenters) for reconstructing more than 5,25,000 houses in 5 years.

Housing sector is not only the largest, but also among the earliest sector to start recovery activities as people take new initiatives to salvage materials, start repairs and construction during the reconstruction phase (Shelter Cluster, 2015). Thus, rebuilding around 7,00,000 houses through the Owner Driven Reconstruction approach, while ensuring 'build back better' considerations, would require preparing huge number of workforce, as the Government of Nepal has committed to provide the affected families with technical guidance, financial assistance, and facilitate the access to material and skilled labor. While the role of the Government of Nepal, is key in the reconstruction process, the role of Partner Organizations is equally important to support the government through resources and capacity building programs. One of the key principles for post-earthquake reconstruction is to ensure build back better. As damaged and destroyed buildings lacked disaster resistant features and did not comply with national building codes or guidelines, it is extremely critical that reconstruction adheres to these features and elements. This necessitates adequate availability of knowhow and skills to the house owners.

PDRF estimates that there will be need of about 60,000 trained artisans (masons and carpenters) for reconstructing more than 5,25,000 houses in 5 years. This will mean a team of nearly 1400-1500 sub-engineers and engineers, 650-800 social workers, 200 information managers, 400-800 other staff responsible for grievance redressal,

coordination, management. All these teams for facilitation will also need training. PDNA and PDRF have already outlined the training needs for housing.

Hence, capacity development program and large scale training programs, for those involved in housing reconstruction, has been emphasized during the reconstruction process, as they play a highly decisive role in ensuring that the quality and risk resilience of the reconstructed housing and supporting the home owners to 'build back safer'. For technical training particularly engineers and artisans, CTEVT and DUDBC had been working to develop training design and curriculum even prior to earthquake. ToT manual for engineers and artisans is available from DUDBC-UNDP. (Training Strategy, NRA).

Total masons required for reconstruction are about 60,000. Based on the reconstruction needs in different districts the following number of masons is estimated.

Table 2.5.2  
Need of Mason

SN	District	Artisans needed
1	Bhaktapur	500
2	Dhading	7000
3	Dolakha	6000
4	Gorkha	7000
5	Kathmandu	300
6	Kavrepalanchok	7500
7	Lalitpur	300
8	Makawanpur	3000
9	Nuwakot	7500
10	Okhaldhunga	2500
11	Ramechhap	5000
12	Rasuwa	1200
13	Sindhuli	4200
14	Sindhupalchowk	9000
Grand Total		61000

(Source: NRA, 2016)

As the housing reconstruction will involve various different personnel, there will be various different type of training required to equip them for their various different roles. A Cascaded Training Approach has been incorporated from training of Master Trainers to Engineers, Sub engineers, Assistant Engineers to Construction Workers to Home Owners. The different types of training being delivered are:

Table 2.5.3  
Training Delivered by NRA

S.N.	Stakeholder	Type of Training
1	Construction workers (Mason, Carpenter, Plumber)	Comprehensive training for new construction workers
		Training for skill enhancement of existing masons regarding earthquake resistant building construction
		On job training for unskilled workers
		Refresher courses for practicing masons and training on building materials
2	Engineers and Technical Professionals	Basic training to enhance the knowledge and application skills on earthquake resistant construction technology
		Trainer development for engineers/technical professionals
3	Instructors and Master Trainers	Trainer to develop qualified instructors who will serve as master trainer for reconstruction
4	Homeowners	Orientation on Building Back Safer

(Source: NRA, 2016)

### 2.5.3 Training of Construction Artisans

Artisans have the most pivotal role in reconstruction as they are the key guide as architect, engineer, manager and skilled worker for the house owner. They need to be strengthened for a successful reconstruction program to ensure safer houses. CTEVT and DUDBC have developed standardized training modules for basic technical options. With some customization, NRA considers these to be the basic training modules necessary for all masons. All masons involved in reconstruction program must go through this training of standard modules. NRA also recognizes that to further train artisans in technologies that are most likely to be adopted by the communities in their region and which may not have been covered in basic training,

additional supplemental training will be required. Therefore, supplemental training curriculum will be developed to address needs of these specific technology options after due approval by DUDBC for use in reconstruction program.

#### **2.5.3.1 Masons**

These houses will be constructed by both local masons as well as masons coming from outside due to high demand once construction goes on full swing. In such situation, it is also very likely that many will be first time masons using opportunities due to high demand and will need skill up gradation and hand holding. These training programs will have to address needs of both current practicing masons as well as new masons.

#### **2.5.3.2. Carpenters**

Carpenters need to be trained particularly in timber and bamboo based disaster resistant features and joineries.

#### **2.5.3.3 On the job Masons' Training**

As large scale reconstruction needs to be completed in relatively short period of time, on the job training of artisans to enhance their skills particularly on the government approved technology options is essential. On the job training option is proposed through prototype demonstrations. Many POs, NGOs are keen to build prototype demonstration buildings. These prototype models can serve two key objectives as stated below.

1. Enable house owners to make informed choice.
2. Provide local artisans opportunity to get hands on training during construction.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

The research methodology is a scientific and systematic way of solving the research problem. It is a method of studying how research is done in a scientific way. This part explains the methodological process of this thesis, including the research design, description of research method, interview technique, selection of sampling, nature and sources of data collection process of data analysis and research constraints. The data collected are then reviewed, analyzed and used to draw conclusions and provide recommendations.

#### **3.1 Selection of the Study Area**

Even though women have been empowered through different means the study focuses only on empowerment of women through hardware masonry construction training on post-earthquake time. For the specification and synchronization of the study, the study was carried out in a highly earthquake-affected District Sindhupalchok. The study was conducted in ward no 12 of Chautara Sangachowkgadhi municipality. The research area was para-urban and para-rural. It reflected a women empowerment scenario in rural as well as urban areas.

After the Gorkha earthquake, different development organizations were working in Sindhupalchowk in the sector of reconstruction. They had provided masonry training to people, and there was participation of females as well in the training. Since participation of women was comparatively more in that area, I had chosen this area for study.

#### **3.2 Nature and Sources of Data**

The data are qualitative as well as quantitative in nature. Primary and secondary data were taken for the study. Primary data was collected by field visit, interview, and interaction while secondary data was collected through published and unpublished literature, journals, I/NGOs reports, websites, research reports, and other relevant literatures. No specific hypothesis was formulated.

### **3.3 Tools and Techniques of Data Collection**

Data are very important which need to be verified and validated for the fact information. The main objective of data collection is to access the details in main five categories; pre training status, during training status, post training status, socio economic status and challenge, experience sharing status. Primary data are collected from site visit and observations, household survey through questionnaire and semi structured interview on the above mentioned categories. The trainers of the trainings were the key informants.

Similarly, secondary data were collected through reviewing documents. Secondary sources of data followed relevant literature reviews, journals and the related articles. The policies, guidelines and mason training curriculum were the major source of secondary data.

Some of the tools used on data collection are as follows:

- 1) Questionnaires
- 2) Interviews
- 3) Observations

#### **3.3.1 Questionnaires Survey**

A set of questionnaires was prepared for the survey of women masons working in reconstruction. Questionnaires were open ended, close ended. Questions were divided into demographic questions, socio economic questions, satisfaction feeling question, opinion and experiences questions.

#### **3.3.2 Interview**

Interview was conducted to get the primary data from the related other people like owner who used women mason in their construction, people working in development organizations who had provided mason training to women and family member of mason.

#### **3.3.3 Observations**

A non-participant observation technique of data collection was also followed in the reconstruction areas.

### 3.4 Sample size and Sampling Procedure

A stratified random sampling method was done for this research. The sample size was determined by using the formula used by Krejcie & Morgan in their 1970 article "Determining Sample Size for Research Activities" (Educational and Psychological Measurement, pp. 607-610). The formula used for these calculations was, Sample size (n) =  $\frac{\chi^2 * N * (1-P)}{ME^2 (N-1) + \chi^2 * P * (1-P)}$

Where,

n = required sample size

$\chi^2$  = Chi square for the specified confidence level at 1 degree of freedom

N = Population size, P = the population proportion (assumed to be 50 since this would provide the maximum sample size)

ME = Desired Marginal Error (expressed as a proportion)

Taking, ME= 0.065

Therefore, n= 23

Hence, total 23 interviewees (women mason) were selected for this study.

### 3.5 Data Presentation and Analysis

Collected data were analyzed using qualitative as well as quantitative methods such as description and using simple statistical tools for example: Tables and figures, pie chart, frequencies and percentages. Relevant articles and document were cited and analyzed.

## **CHAPTER IV**

### **DATA PRESENTATION AND ANALYSIS**

This chapter deals with the introduction to study area, demographic and socio-economic status of women masons and the findings of field work conducted. The findings on broader issues will be discussed below and the findings obtained from the field survey have been presented. The set of information in these sections might overlap or same times contradict with one another. It is believed that the readers will acknowledge the limitation of the methods and respect the importance of the issues raised.

Data collected from the household level and community level questionnaire survey are coded for computer entry. The Microsoft Excel were used for the generation of outputs. The data set are analyzed using simple charts. Basic statistical tools including percentage are used in the analysis.

For ease of data analysis data are categorized into demographic details, pre training details, training details, post training details, socio economic details and experience, opinion sharing details.

#### **4.1 Introduction of Sindhupalchowk District**

Sindhupalchowk district is a part of province number 3 and one of the seventy seven district of Nepal with an area of 2,542 km<sup>2</sup> with a population of 2,87,798 (CBS, 2011). The district's headquarter is in Chautara. It is divided into 3 municipalities (Chautara Sangachowkgadhi, Barhabise and Melamchi) and 9 rural municipalities.

##### **4.1.1 Introduction of Study Area**

Chautara Sangachowkgadhi is municipality in Sindhupalchowk district in the Bagmati Zone of central Nepal. The municipality was established on 18<sup>th</sup> May 2014 merging Pipaldanda, Chautara, Kubhinde, Sanosiruwari VDCs as Chautara Municipality. Later on 2017 it was expanded again merging Sangachowk, Thulo Siruwari, Kadambas, Irkhu, Batase and Syaule VDCs to form Chautara Sanngachowk municipality. It is divided into 14 wards.



This village was severely affected by the Gorkha earthquake on 25<sup>th</sup> April 2015. It lies at a distance of 15km from district headquarter, Chautara. Many buildings had collapsed during earthquake in this village.

Sangachok is village market center of Chautara Sangachowkgadi Municipality in Sindhupalchok District in the Bagmati Zone of Central Nepal. It is located 60km east of Kathmandu.

The formerly Village Development Committee was merged to form the new municipality on 2017 (Wikipedia). The VDC has now been divided into Ward 10, 11 and 12 of the municipality.



Figure 4.1.1

Google Map of Sangachowk VDC

(Source: Google Maps)

## 4.2 Demographic Features of Respondents

While doing field survey demographic data were collected and analyzed.

### 4.2.1 Academic Qualification

Education plays a vital role in empowerment of an individual. There is common saying that “ Educate a man you will have educated one person but educate a women you will have educated a whole family.” Education is not only a means of knowledge but also a step towards self-dependence. Thus, the present study has tried to find out the education level of female masons who had involved in mason training organized by GO, I/NGOs to support in reconstruction phase after Gorkha earthquake 2072.

Table 4.2.1  
Academic Qualification

SN	Education Level	Nos of Respondents	Percentage
1	Illiterate	9	39.13
2	Primary	12	52.17
3	Secondary	2	8.70
Total		23	100

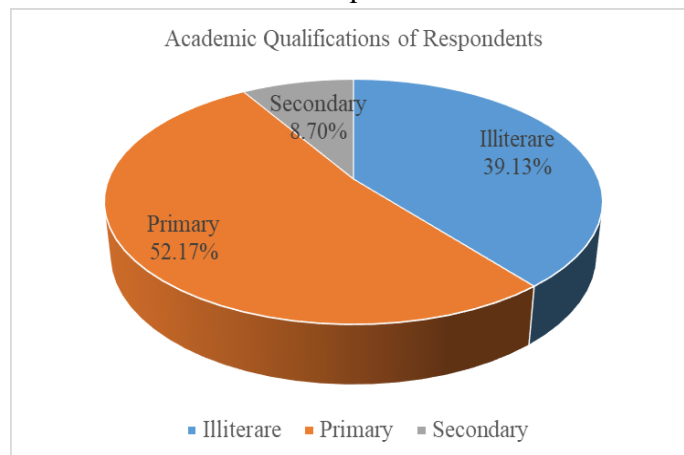
(Source: Field Work, 2017)

While analyzing the data, out of 23 respondents 9 were illiterate, 12 had completed primary level of education and 2 had completed their secondary level of education. Even though basic education determine the respondents involvement, dedication and other factor on work pre assumption was that the people involved in construction work as mason are illiterate or are with basic education.

According to the figure 4.2.1, 61 percent of the respondents have received at least primary education whereas 39 percent are illiterate.

Finding shows that, 8.70 percent respondents have completed their secondary level of education, 52.17 percent have passed only primary level of education and rest 39.13 percent are illiterate. The figures shows that more than 50 percent have completed the basic level of education.

Figure 4.2.1  
Academic qualification



(Source: Field Work, 2017)

#### 4.2.2 Age Group of Respondents

Age play an important role for personal and career development. Hence, the study has tried to find out the age of females working as masons in construction work. The table 4.2.2 shows that out of 23 respondents, 6 had the age of below 30, 13 had in between 30 to 40 and 4 had the age above 40 years.

Table 4.2.2

Age group of Respondents

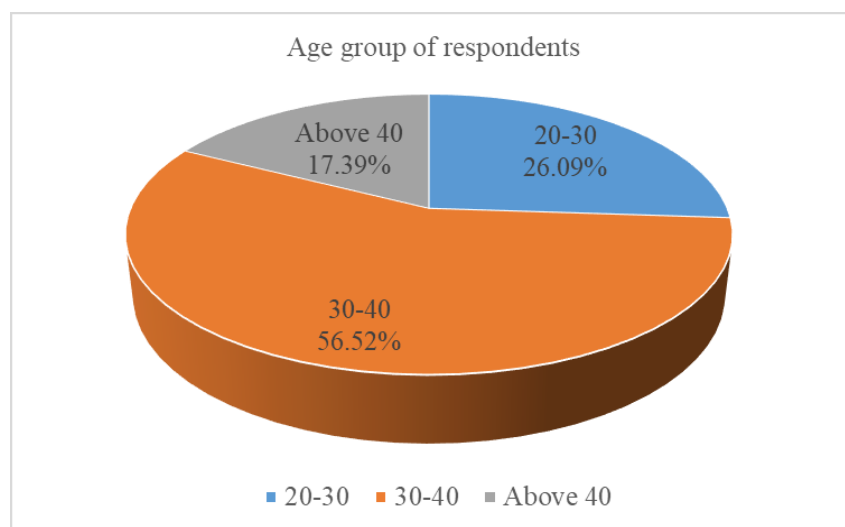
SN	Age group	Nos of Respondents	Percentage
1	20-30	6	26.09
2	30-40	13	56.52
3	Above 40	4	17.39
Total		23	100

(Source: Field work, 2017)

The figure 4.2.2 depicts that age composition of the respondents is mixed. The age group of the participants is categorized in three groups as between 20 to 30, between 30 to 40 and above 40. The major age group of the participants is middle age, between 30 to 40 which is 56.52 percent of the total. Participants of age group of 20 to 30 were 26.09 percent, whereas 17.39 percent of the participants are above 40. Data shows that middle age group are attracted on this category of work.

Figure 4.2.2

Age Group of Respondents



(Source: Field work, 2017)

### 4.2.3 Castes and Ethnicity

Caste is one of the major determinant to choose the profession in context of Nepal. Yet there are believes that certain work are only done by certain caste group. Table 4.2.3 shows that among 23 respondents 6 were from chhetri caste, 9 were from dalit and 8 were from janajati catse. On the post-earthquake scenario almost all caste group residing on the area are found to be involved and attracted to the masonry work.

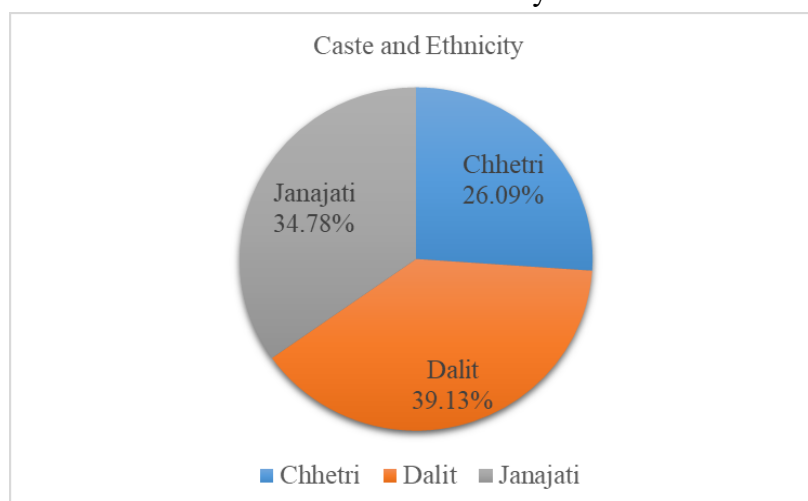
Table 4.2.3  
Castes and Ethnicity

SN	Caste	Nos of Respondents	Percentage
1	Chhetri	6	26.09
2	Dalit	9	39.13
3	Janjati	8	34.78
Total		23	100

(Source: Field Work, 2017)

The figure 4.2.3 depicts that the respondents comprise three caste and ethnic groups: Chhetri, Janajati and Dalit 26.09 percent of the selected respondents belongs to Chhetri group, 34.78 percent belongs to Janajati group and 39.13 percent belongs to dalit group. From the data we can see that dalit castes are more attracting with the mason job.

Figure 4.2.3  
Castes and Ethnicity



(Source: Field Work, 2017)

#### 4.2.4 Marital Status

The table 4.2.4 presents that among 23 respondents 18 were married, 4 were unmarried and 1 were divorced. Majority shows married.

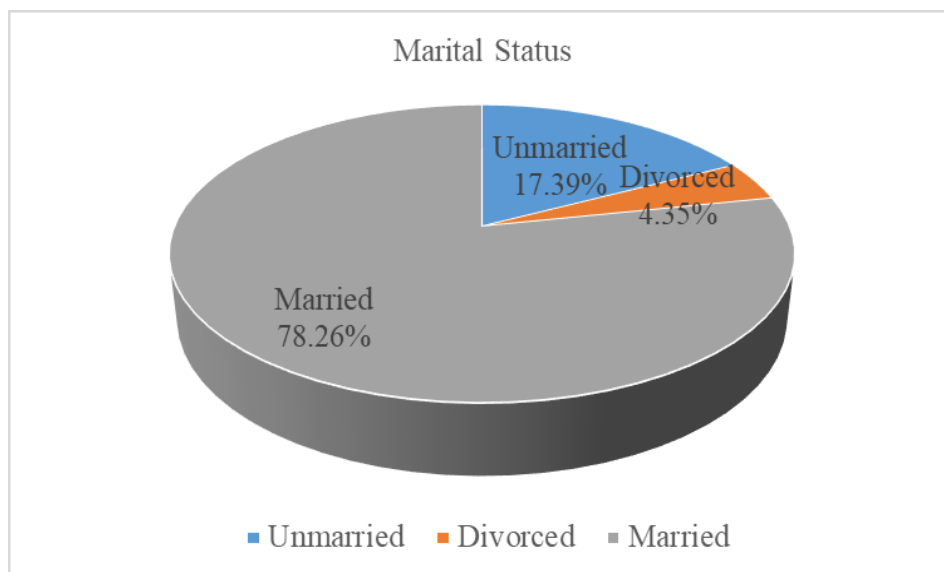
Table 4.2.4  
Marital Status

SN	Description	Nos of Respondents	Percentage
1	Married	18	78.26
2	Unmarried	4	17.39
3	Divorced	1	4.35
Total		23	100

(Source: Field Work, 2017)

The figure 4.2.4 shows 78.26 percent of the total respondents were married, As the age group of the respondent is 30-40 is highest most of them are married while, 17.39 percent were unmarried and 4.35 percent were divorced. This means that married women are more involved in masonry job. Training have focused vulnerable and needy women and organizations would also prefer to participate married women in a mason training to stop the dropout rate.

Figure 4.2.4  
Marital Status



(Source: Field Work, 2017)

#### 4.2.5 Family type of Respondents

The table depicts that 22 family have nuclear family and 1 family has joint family. It clearly shows that most of them are from nuclear family.

Table 4.2.5

Family type of Respondents

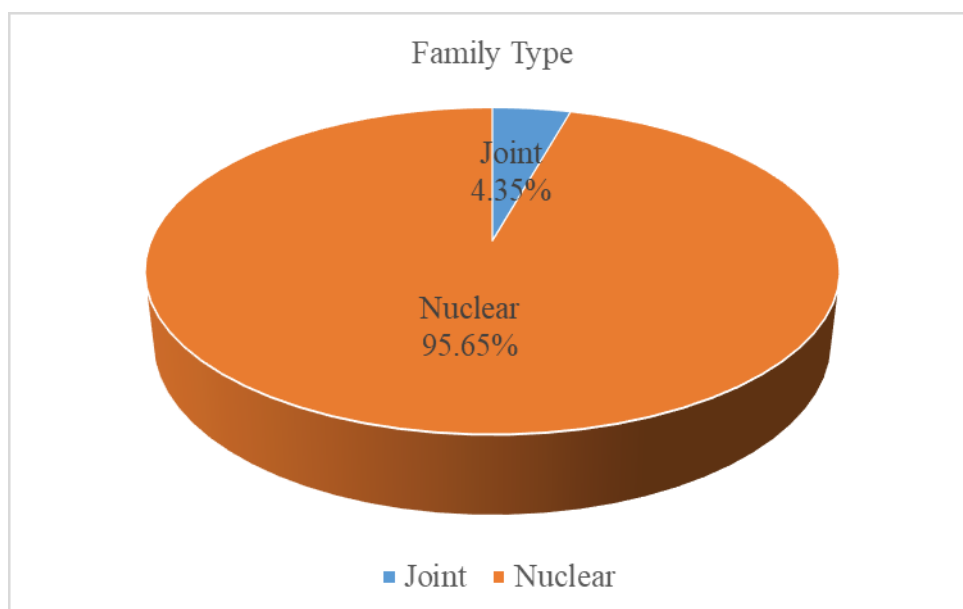
SN	Description	Nos of Respondents	Percentage
1	Joint	1	4.35
2	Nuclear	22	95.65
Total		23	100

(Source: Field Work, 2017)

The figure 4.2.5 shows that high percentage of respondents, 95.65 percent were having nuclear family. Only 4.35 percent of the respondents have joint family.

Figure 4.2.5

Family type of Respondents



(Source: Field Work, 2017)

#### 4.2.6 Family Size

The table 4.2.6 shows that one is single women, 15 respondents has family member up to 5 and 7 has family member more than 5.

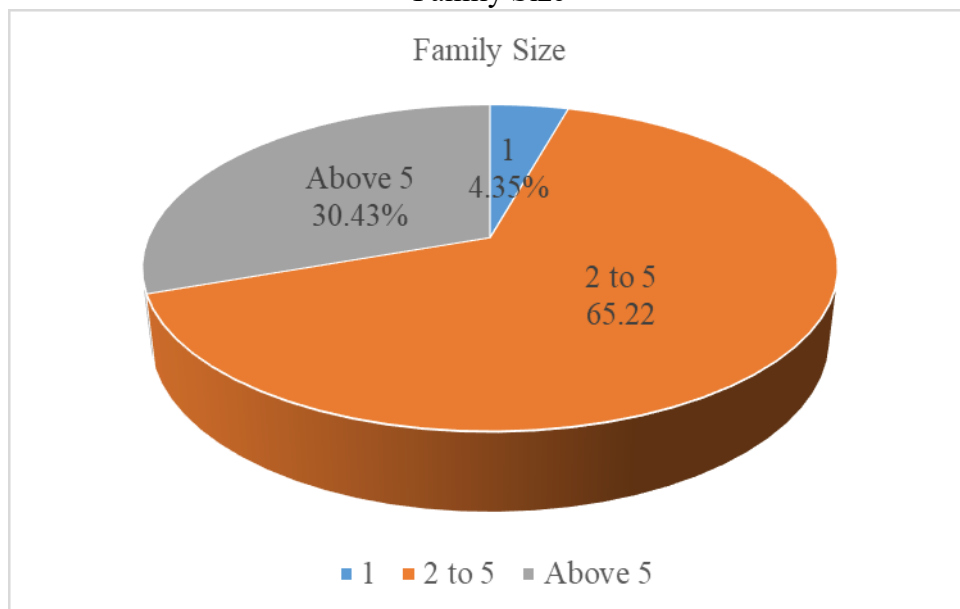
Table 4.2.6  
Family size

SN	Family Member	Nos of Respondents	Percentage
1	1	1	4.35
2	1-5	15	65.22
3	Above 5	7	30.43
Total		23	100

(Source: Field Work, 2017)

The figure 4.2.6 states that high percentage (65.22 percent) of respondents, live in a family with family member of 2 to 5, whereas 30.43 percent of the respondents have family size of above 5 and 4.35 percent have family size of 1.

Figure 4.2.6  
Family Size



(Source: Field Work, 2017)

### 4.3 Pre Training Details

Before joining in training what types of working experience in construction sector, types of works worked by participant and knowledge they have related to construction were collected in this pre training details.

#### 4.3.1 Working Experience

The table shows that 22 respondents don't have any prior experience in construction sector. Only 1 had experience in construction sector more than of 3 years.

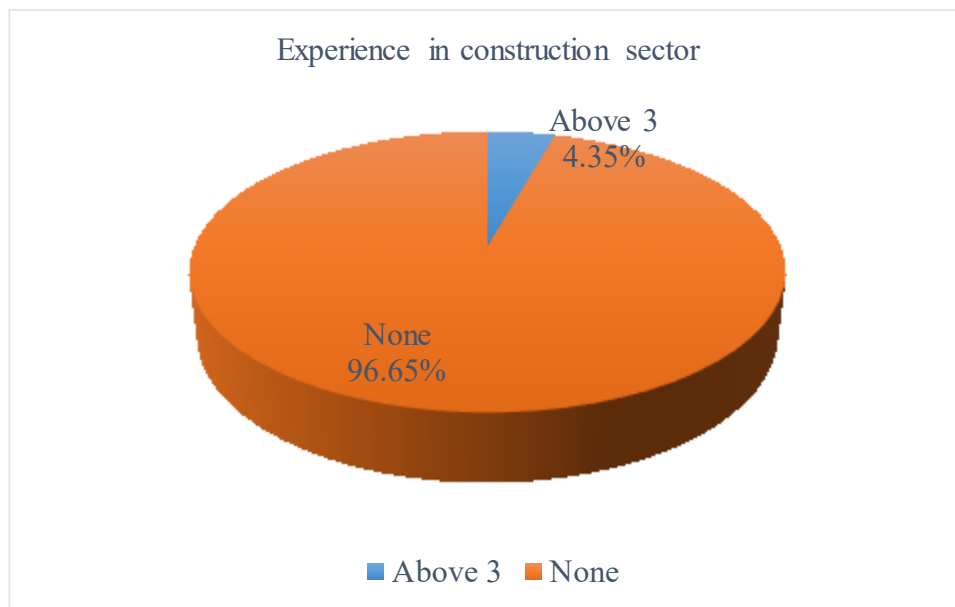
Table 4.3.1  
Working Experience

SN	Experience in construction (years)	Nos of Respondents	Percentage	Remarks
1	Above 3	1	4.35	
2	None	22	95.65	
Total		23	100	

(Source: Field Work, 2017)

The figure 4.3.1 shows that 95.65 percent of the respondents participating in the training had no previous work experience in construction industry. Only 4.35 percent of total respondent was involved in construction industry for more than 3 years.

Figure 4.3.1  
Working Experience



(Source: Field Work, 2017)

#### 4.3.2 Nature of Job

The table shows that 22 respondents did not involve in any types of construction work before they attend mason training, only one had worked as head mason in construction sector.



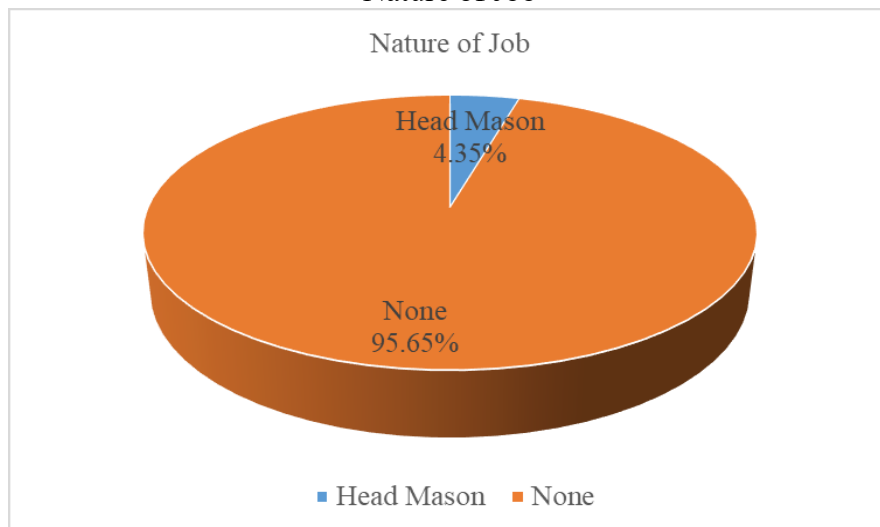
Table 4.3.2  
Nature of Job

SN	Job Nature	Nos of Respondents	Percentage
1	Head Masons	1	4.35
2	None	22	95.65
Total		23	100

(Source: Field Work, 2017)

The figure 4.3.2 shows that only one mason (4.35 percent) who had a work experience of above 3 years before participating the training was working as a head mason.

Figure 4.3.2  
Nature of Job



(Source: Field Work, 2017)

#### 4.3.3 Experience in Building Type

The table 4.3.3 shows that only one respondents had involved in to the construction works of residential building type. Others don't have experience in any types of buildings .

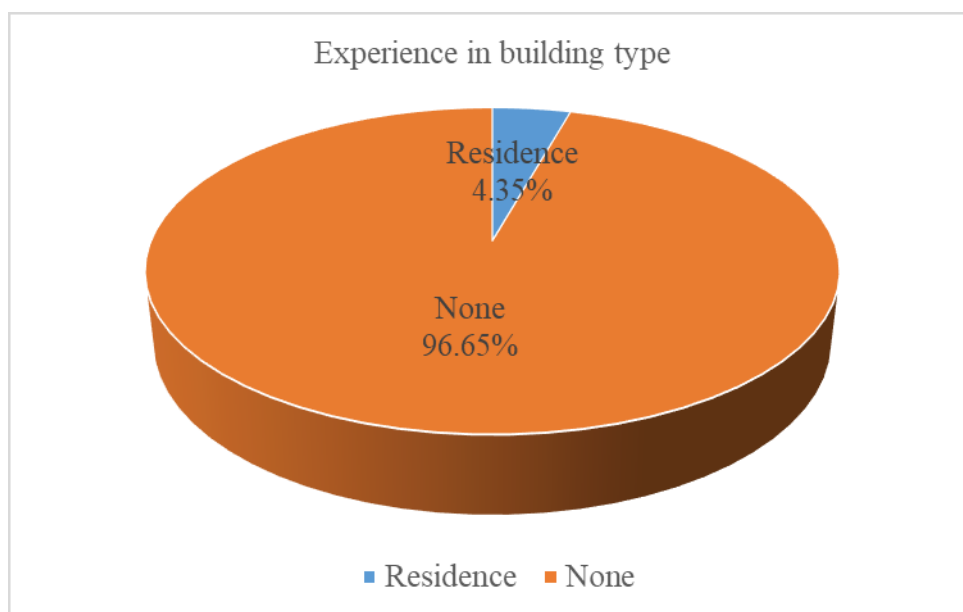
Table 4.3.3  
Experience in building type

SN	Job Nature	Nos of Respondents	Percentage
1	Residential building	1	4.35
2	None	22	95.65
Total		23	100

(Source: Field Work, 2017)

The figure 4.3.3 shows that the respondent working as the head mason was involved in residential projects, involving in the construction of residential buildings in villages.

Figure 4.3.3  
Experience in building type



(Source: Field Work, 2017)

#### 4.3.4 Experience in Structure Type

The table 4.3.4 indicates that only one respondents have involve into the types of building structure in Reinforced Cement Concrete.

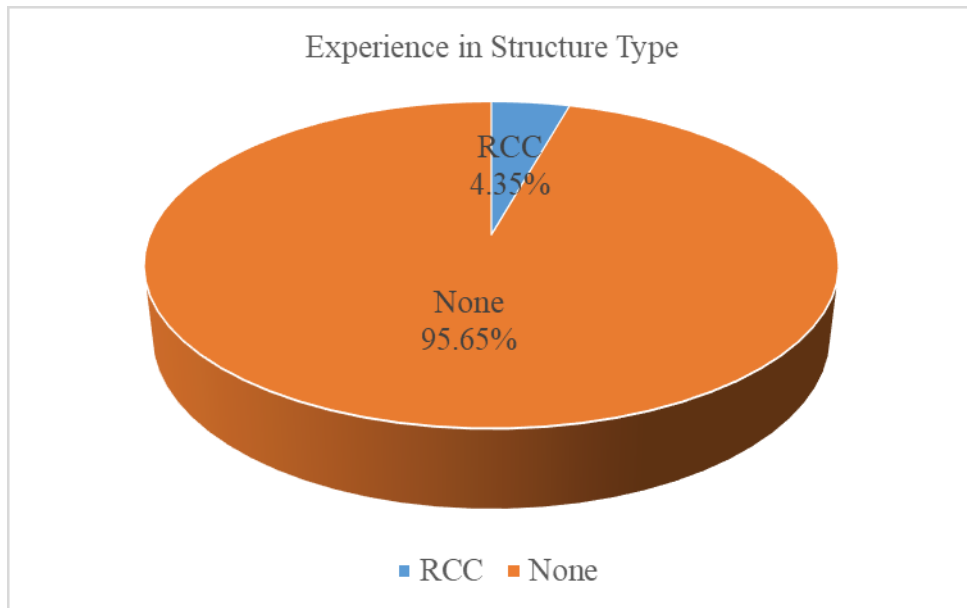
Table 4.3.4  
Experience in Structure Type

SN	Job Nature	Nos of Respondents	Percentage
1	RCC building	1	4.35
2	None	22	95.65
Total		23	100

(Source: Field Work, 2017)

The figure 4.3.4 shows that the respondent (4.35 percent) working as the head mason was involved in RCC (Reinforced Cement Concrete) residential buildings.

Figure 4.3.4  
Experience in Structure Type



(Source: Field Work, 2017)

#### 4.4 Training Details

Information about training (within the training and after training) and its effectiveness were collected in this section.

##### 4.4.1 Types of Training

The respondents participated in two types of training; 50 days Vocational Training for Unskilled Persons and 7 Days DUDBC Short Training for Rural Areas. Table 4.4.1 shows that 73.91 percent of the respondents were trained through the Short Training while 26.09 percent were trained through Vocational Training.

Table 4.4.1  
Types of training

SN	Training Type	Nos of respondents	Percentage
1	7 Days DUDBC (Rural)	17	73.91
2	Vocational Training	6	26.09
Grand Total		23	100

(Source: Survey, 2017)

##### 4.4.2 Information about Training

NGO were organizing the training, notice through FM radio and notices at wards were used to disseminate the information about the training. Table 4.4.2 shows that 73.91 percent of the respondents were directly approached by the organizer whereas 26.09 percent got to know about the training through Radio and Government Notice at

Ward Office. NGO had directly contacted to the participant of training and selected as per their selection criteria.

Table 4.4.2  
Information about Training

SN	Training Source	Nos of respondents	Percentage
1	NGO TUKI	17	73.91
2	Radio, Notice	6	26.09
Grand Total		23	100

(Source: Survey, 2017)

#### 4.4.3 Number of Women Participant in Each Training

GO, I/NGO had organized the mason training. While analyzing the women participation in each shift training at least 4 females participated in each training. The highest number of female participation in one training event is 9.

Table 4.4.3  
Number of women participant in training

SN	Number of women participant in Training	Nos of Respondents	Percentage
1	4	4	17.39
2	6	12	52.17
3	9	7	30.43
Total		23	100

(Source: Survey, 2017)

#### 4.4.4 Type of Hindrances

From the field survey it was found that all of the respondents had to tackle at least one major hindrance to manage time for all the sessions of the training. From the table 4.4.4 we can see that 83.61 percent of the respondents had to face social barriers to participate in the training. One respondent mentioned daily household chores to be the major hindrance whereas 13.04 percent of the respondents had to tackle both the barriers.

Table 4.4.4  
Types of hindrances

Hindrance Type	Nos of Respondents	Percentage
Both	3	13.04
Daily household chores	1	4.35
Social barriers	19	83.61
Grand Total	23	100

(Source: Survey, 2017)

#### **4.4.5 Reasons to Participate in the Training**

From the information of respondents it was found that all the respondents participated in the training to develop their skill as a mason. They want to contribute their skill in the reconstruction phase.

#### **4.4.6 Equal Participation in all Session of the Training**

While analyzing the survey data it was found that all of the respondents were able to participate equally in all sessions (theory and practical) of the training. They had actively participated in the training. Since most of them are new for this sector so they have more curiosity in learning the skill.

#### **4.4.7 Training Effectiveness**

From the information of training participant, the training was fruitful and effective in acquiring the skills of masons in construction. Learnt many things together with the mason skills.

#### **4.4.8 Suggestion to Make the Training Effective**

All the respondent suggested that equal participation of male and female in training would be effective; participation of female in each training is less in comparison to male.

### **4.5 Post Training Details**

Information about the activities that trained masons are involving are collected in this section.

#### **4.5.1 Work Continuation Post Training**

Majority of the respondents which constitute 69 percent of the total respondents are not involved in construction activities post training. Only 22 percent of the respondents are involved full time in construction activities whereas 9 percent contribute part time to construction activities.

#### **4.5.2 Working Experience**

Four of the respondents have been involved in construction activities for more than a year and three of them below one year post training whereas sixteen of them are not involved into any construction activities post the training.

#### **4.5.3 Nature of Job**

Only two of the respondents work as head mason, five of them have been working as support mason and none of the respondents work as contractor.

#### **4.5.4 Experience in Building Type**

Of the seven respondents who are involved into construction activities, all are working in individual residences building construction in rural areas.

#### **4.5.5 Experience in Structure Type**

Six of the respondents are involved into Stone and Brick masonry in Cement mortar type building construction typologies whereas only one is working into RCC typology.

#### **4.5.6 Work Coverage**

All seven of the respondents continuing work post training are limited within their ward for their construction works. None of them have reached beyond their ward boundaries to neighboring wards and districts for work.

#### **4.5.7 Reasons for Continuing the Work**

All of the respondents continuing construction activities work to support the family income.

#### **4.5.8 Reasons for Drop-out**

Of the total 16 respondents who have dropped out, 13 could not continue work because of the socio cultural barriers whereas 3 of them had to face partiality at work.

### **4.6 Socio Economic Details**

It is assumed that through the training there will be some changes in the socio economic status of trained women. Information regarding this were collected in this topic.

#### **4.6.1 Change in socio Economic Status working as Mason**

Four of the respondents responded achieving social prestige working as mason while one of the respondents responded that she contributes enough to the family economic status.

#### **4.6.2 Income to Contribute to the Family**

Only one of the respondents which is 4 percent of the total respondents replied positive regarding enough income as a mason to support her family.

#### **4.6.3 Change in Living Status Working as a Mason**

All of the seven masons continuing work mentioned change in living status after working as mason.

#### **4.6.4 Usage of Income**

All of the seven masons continuing work use their income for the daily household activities, none of them save enough for future.

#### **4.6.5 Encouraging Others into Construction Works**

Seven of the respondents who are still involved in construction activities have been able to encourage neighboring women to get involved into construction activities whereas those who have dropped out could not encourage any women

### **4.7 Experience and Opinions**

Open discussion was also carried out while survey with the trained mason. Through the open discussion challenges at work, opportunity at work and how they can be retained in the construction sector were collected.

#### **4.7.1 Training Encourages to Retain into Construction Works**

All the respondents responded that such training activities encourage women to involve into construction works. 61 percent of the respondents were encouraged to participate in trainings to work as a mason with the hopes of getting jobs more easily whereas 39 percent had a view that participating in such trainings will increase their decision making capacity at work.

#### **4.7.2 Major Challenges at Work**

Regarding the major challenges at work, 52 percent selected directed low priority work, 22 percent selected unequal pay and 26 percent selected low trust of clients.

#### **4.7.3 Major Challenges as Mason**

The major challenge to 69 percent of the respondents is Less or No support from family, for 9 percent of the respondents is Socio cultural barriers and for 22 percent of the respondents is unsatisfactory payment.

#### **4.7.4 Opportunities as a Trained Mason**

Being trained as a mason and getting involved into construction activities, all of the respondents responded that they can have an opportunity to contribute to family, society and overall reconstruction post-earthquake.

#### **4.7.5 Retention of Women Mason in Construction Sector**

To retain and empower more women masons in construction sector, all respondents suggested providing works, promoting local women mason and providing refresher trainings.



## CHAPTER V

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary of Findings

Majority of the trained masons 52 percent had completed primary level of education whereas only 9 percent had completed secondary level of education and 39 percent had illiterate. Majority of the mason 57 percent have age range of (30-40) years, 26 percent are of range of 20-30 years and few have age of more than 40. Analyzing the caste majority caste were of dalit followed by janajati and chhetri. 78 percent masons are married and only one mason was divorced. Majority are living in nuclear family with family size of 2 to 5.

While analyzing the pre training details, only one mason had experience more than 3 years in construction works, all other were new in this sector. That one mason had worked as head mason in the construction of residential building, he has experience in RCC (Reinforced Cement Concrete) structure.

There was provision of two types of training to masons in the field. One was short term (7 days) which was conducted by DUDBC and another was long training (50 days) which was conducted by CTEVT, the second one training conducted by CTEVT was on the job training type. Majority of the masons 74 percent had attained the short type of training 7 days DUDBC and rest had taken second type of longer training conducted by CTEVT. For the dissemination of information two way was followed; one is directly through the NGOs mobilizer and another was used FM media and notice from local level. Most of the masons 74 percent had got information from first way. In each package of training there was women participation of minimum of 4 to maximum of 9. To participate in the training daily most of participant have to manage some social barrier. The aim of all mason in training was to develop their skill on construction so that they can contribute later on. Training was fruitful in achieving the aim of the participant. They all had suggestion to make training effective was equal participation of female as male.

Seeing the scenario of post training details only 7 were working among which 5 were working as full time and 2 were working as part time. Four had working continuously working since 1 year and three had working less than a year, 2 had working as head mason and 5 had working as support mason. They all were working in their own villages. They were involving in the construction of residential building with RCC structure type. They were continuously working to support their family. While asking rest 16 trained mason, who were not involving in any types of construction after training, most of them left the mason job due to social barrier and some left due to partiality in work.

It was found that 4 mason told that their social prestige while working as a mason had increased. 1 had increased her social status as well as economic status in a society. Only 1 mason (4 percent of total) was enough to support her family economically and she was satisfied with her work. Other had just making few amount only. They all were using the income for daily household use. 7 masons who are continuously working were able to convince and encourage neighbor women to get into construction works, rest who were drop out could not convince to others to get into construction jobs. From this scenario we can say that community are trusting to the people who are continuously working and showing their performance in village.

Mason Training not only encouraged to women in construction works but also helped in increasing capacity building. The major challenge at work found was putting mason job at low priority by general people, there was also low trust by clients to women masons and there was found disparity of paying, unequal paying to men mason and women mason. Most of the women masons (69 percent) were not getting or no/less support from the family to continue his job. With the payment also masons were not satisfied and drop the work. All were convinced with that trained masons can contribute to family, society and overall reconstruction in post-earthquake scenario. It was found recommendation from trained mason that to retain/empower women mason in construction sector there should provide work, promote local masons and provide refresher training to mason.

The summary of the findings of this study:

1. Women masons are attracted in the construction profession hoping to get works easily and increase in capacity building. They can contribute to family, society and reconstruction work as they have seen that due to earthquake most of the shelter are destroyed and people are still living in tent and temporary shelter.
2. The main demotivating factor in continuing the mason job was socio cultural barrier, study shows that 13 trained mason left their mason job due to the socio culture barrier. 3 left the job due to partiality in work. The another demotivating factor is, disparity in payment among the male and female, female are paying less than male for the same job and same working hour. Still women are not trusted by client in the mason job, all the clients don't have trust that women can do the job of mason.
3. The study shows that 4 had increased their social prestige and 7 who are continually working after training are able to support the family for the daily households needs, one of them had enough income to support her family.
4. Women mason can be encourage and retain in construction work beyond reconstruction phase by providing/facilitating in work, promoting local women mason instead of workers from outer side and providing refresher training in certain interval of time to make them updated and increasing their skill.

## **5.2 Conclusion**

This study infers women's employment in the construction sector as mason increases their empowerment in each and every sphere of the society. This is helping women being skilled and economically independent and surfing opportunities for further advanced skills in construction and career enhancement. Their participation in trainings and social activities are also increasing. Hence, the employment opportunities in construction itself providing to trained mason in post reconstruction phase is one of the effective ways to empower educated women in the society.

However, the findings of the present study shows that the few women masons are continuing their job as mason as compared to their male counterparts. Both male and female get same priority for getting chance for their participation in training; capacity building however, male being dominated in nature captures the opportunities in most cases, also support from the family to women to go to mason job is in negligible amount. The supporting organizations for mason training have definitely are helping women being empowered socially, economically due to the socio-cultural setup in the Nepalese society which will need more time to get improve in the long run.

### **5.3 Recommendations**

Based on the findings the following recommendations are given in order to empower women mason socially, skillfully and economically.

1. Consultation with the family should be done by the training organizer before selecting the training participant. So that she will get support from family can continue her job after training.
2. The GOs, I/NGOs should organize awareness program in the community to encourage in using women mason while constructing the houses and other infrastructure at local level; they have clarify that women can do as men in construction job.
3. There should not be disparity in the payment among the men and women. Rate of payment should same for men and women for same job and same period of working hour.
4. As most of the masons have appeared first time in the training, so refresher training should be organize in a certain level of interval to encourage them and to update them in terms of skill and updated technologies in construction.
5. All the local level government line agencies and development organizations should facilitate to have good working environment for women masons.

6. Since massive construction works are going on in the mostly affected areas in post-earthquake stage. There is large demand of construction worker, to fulfill the demand of construction worker it should be supply from other side of the country; but while using labors from other areas there might be hesitation to local newly trained women mason; so first priority should be given to local mason then only to others to encourage them in work.

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## ANNEX - A

### Survey Questionnaires for women mason

This questionnaire is prepared for the thesis work of Masters of Arts in rural development of Mahendra Ratna Multiple Campus, Ilam. This information will be supplemented by semi structured interviews, focus group discussions and information from secondary sources. Answers received by different means will have secrecy, data collected will be based on facts and realistic.

#### Section A: Demographic Information of Respondents

1. Name: .....
2. Age: .....
3. Marital Status
  - a) Married
  - b) Unmarried
  - c) Divorce
  - d) Single women
4. Type of Family
  - a) Nuclear
  - b) Joint
5. No. of dependent in your family
6. Academic Qualification
  - a. Illiterate
  - b. primary
  - c. secondary
  - d. higher
7. caste and ethnicity
  - a) Dalit
  - b) Advantage janajati
  - c) Disadvantage Janajati
  - d) Chhetri
  - e) Brahmin
  - f) Others
8. Technical Qualification (If any): .....

- 9. Nature of Job: .....
- 10. Location of Job: .....
- 11. Working Hour per day: .....
- 12. Year of Experiences: .....

**Section B: Opinion Questions**

13. What factor motivated you to take mason training?

.....  
.....  
.....

14. Are you actively involved in mason work after receiving training?

Yes No

15. What do you see most opportunities as a trained mason on reconstruction phase?

- a) It creates market for qualified person
- b) Make you able to generate sufficient income providing you employment opportunities
- c) Make you able for taking decision
- d) Enhance your skill of adaptability
- e) Help to increase confidence and empower

16. Pulling Factor (Why you are attracted to in this employment)

- a) Desire to make career
- b) Desire to generate income and be independent
- c) Inspired by its vision and goal
- d) Inspired by other's success
- e) Desire to do social work

17. Main Constraints on the mason profession

- a) Desired qualification and language
- b) Unequal remuneration
- c) Mobilization
- d) Competition and favoritism
- e) Social and cultural barrier

18. What factor basically demotivate you in your mason job as a women

- a) Family perception
- b) Unsupported from family and society
- c) Unsatisfactory payment
- d) Hard job nature
- e) Nothing to be demotivated

**Section C: Socio-economic Experience Questions**

19 Does your family give preference to this work?

- a) Yes
- b) No

20. How do you experience the views about the society about you as mason worker?

.....  
.....  
.....

21. How do you feel about your relationship attitude of your senior and coworker as a mason?

.....  
.....

22. Who decides about the use the money that you earn?

- a) Husband
- b) Other member of the family
- c) Self

24. Have you experience the changes in your skill and knowledge?

.....  
.....

25. Have you experience change in your confident level?

- a) Yes
- b) No

26. If yes what type of confident have you acquired?

.....  
.....  
27. What are your roles as employee and family members?  
.....  
.....

28. Does your family support you for the profession that you have chosen?

a) Yes

b) No

29. Does your family consult with you for the any kind of decision making in the family matters?

a) Yes

b) No

30. Do you experience changes in the living standard of you and family by joining in work?

a) Yes

b) No

31. What is your saving pattern?

a) Yes

b) No

32. Do you also give or spend your income to your maternal parents?

a) Yes

b) No

**Section D: Satisfaction Feeling Questions**

33. Are you satisfied with your wages and work?

a) Highly satisfied

b) Satisfied

c) Dissatisfied

34. Are you satisfied with your non-policies of government regarding construction?

- a) Highly satisfied
- b) Satisfied
- c) Dissatisfied

35. Are you satisfied with your work load?

- a) Highly satisfied
- b) Satisfied
- c) Dissatisfied

36. When do you feel stress and demotivated?

-----  
-----

37. How often do you have opportunities to update and upgrade your knowledge?

-----  
-----

38. Do you have freedom to participate and make decision with your position?

-----  
-----

39. Do you think what the other constraints in this employment for women are?

-----  
-----

## **ANNEX - B**

### **Observation Checklist**

Information regarding trained masons will be collected by the observation of works that they are involving in different stages.

How actively they are involving in construction work?

-----

Which type of environment the trained mason are getting in work?

-----

How society is accepting women masons' work?

-----

How women are managing household work while involving in construction work?

-----

What level of confident have with the trained mason?

-----

## **ANNEX - C**

### **Interview Checklist**

Responses regarding the masons will be collected from related stakeholders, so that it can be collected exact information and that would helpful to development organizations in further program planning process.

How people of community are taking women mason in construction work?

-----

How their family is supporting to women mason in their job?

-----

What are the challenges at work and opportunity as working as mason?

-----

What the development organization have strategy to retain women mason in construction sector?

-----

How government is giving this work in his priority?

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## ANNEX - D

### Research Related Photography



Photo 1 while doing questionnaire survey with the women mason working



Photo 2 Participants practicing in field during training period



Photo 3 Women mason working in construction site



Photo 4 Women mason working in construction site