

**SOCIO-ECONOMICS IMPACT OF EARTHQUAKE-2072 IN
WOMEN:
A CASE STUDY OF KHOKANA LALITPUR**

**A Thesis Submitted to:
Central Department of Rural Development
Tribhuvan University
in Partial fulfillment of the Requirements for the
Degree of the Master of Arts (M.A.)
in
Rural Development**

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RECOMMENDATION LETTER

The thesis entitled **Socio-Economic Impact of Earthquake-2072 in Women, A Case Study of KhokanaLalitpur**, has been prepared by **PrajeenaMaharjan** under my guidance and supervision. I hereby forward this thesis to the evaluation committee for final evaluation and approval.

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Ramesh Neupane
Thesis Supervisor

Date: 2074-12-06
(2018-03-20)



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APPROVAL LETTER

The thesis entitled **Socio-Economic Impact of Earthquake-2072 In Women, A Case Study of KhokanaLalitpur**, submitted by **PrajeenaMaharjan** in partial fulfilment of the requirements for the Master Degree (M.A.) in Rural Development has been approved by the evaluation committee.

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DECLARATION

I hereby declare that the thesis entitled **Socio-Economic Impact of Earthquake-2072 in Women, A Case Study of Khokana Lalitpur**, submitted to the Central Department of Rural Development, Tribhuvan University, is entirely my original work prepared under the guidance and supervision of my supervisor Ramesh Neupane. I have made due acknowledgements to all ideas and information borrowed from different sources in the course of preparing this thesis. The results of this thesis have not been presented or submitted anywhere else for the award of any degree or for any other purposes. I assure that no part of the content of this thesis has been published in any form before.

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Prajeena Maharjan

ABSTRACT

The thesis entitled " Socio-Economic Impact of Earthquake-2072 In Women, A Case Study of Khokana Lalitpur". The specific objectives of the study are: to examine the present general scenario of the study area after earthquake-2072, to compare the socio-economic status of women before and after earthquake, to analyze the health problems after earthquake, to analyze the educational problems after earthquake.

The study attempts to explore and investigate the socio-economic and decisional power of women in the society, so, it is an exploratory as well as descriptive type of study. As the study targeted women, respondents and locations were selected using purposive sampling (the snowballing technique) in collection of data by the researcher. Out of 1,056 households 837 were completely or partially damaged by the earthquake 2072. Among the 837 households, 8 % i.e. 64 household were selected as sample.

The findings of the study are none of the respondents were involved in government sector before the earthquake, but after the earthquake, one woman became selected in the local government authority as the ward member. Before the earthquake there 32 respondents were not involved in any institution but after the earthquake only 26 members have not been involved that means 6 members have been involved in different institutions especially in health institution and socio-cultural like mother groups and cooperative groups. The majority of the household depend on agricultural income, 65.62 % of the respondent households has main income source is farming, whereas 21.87% were depend upon wage labour. Status of income and expenditure of respondents shows that before the earthquake there was no deficit but after the earthquake 40.62% had deficit. After the earthquake most of the respondents' income had been changed. 31.25% respondents' income had been decreased by below 10,000 whereas 59.38% had no change in income. Before the earthquake, 93.75% had no loans but after the earthquake 65.63% had taken loans more or less. 26.56% had taken loans 100,000-500,000 rupees.

Almost all respondents have health issues during earthquake. 18.75% had mental problems and 15.63% had been disabled, out of them 10% had severe and normal degree of disabilities. Food and nutrition supply was also affected during earthquake. 45.31% had no enough food and nutrition during the earthquake, among them 19 respondent had fever, diarrhoea and anxiety.

The education status of women is 29.69% of women are illiterate and only 6.25% of women were studied more than bachelor level. During the earthquake, most of the schools were closed for more than months but after few months there is regularity in the education. Hence, 85.94% of the students were regular in schools whereas 7.81% of the students dropout due to earthquake, among them 80% were boys.

There was a great impact of socio-economic status of women in Khokana. But in involvement in various sector after the earthquake, they had involved in socio-cultural groups like mothers' group and other local health institutions. Lots of people died during and after the earth quake 2072. Most of the respondent had health issues during and after the earthquake. There was a disturbance on education of the school going students during the earthquake. All the educational institution were closed for few months. But after a few months, the students went to schools regularly.

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ABBREVIATIONS

CBS	:	Central Bureau of Statistics
FY	:	Fiscal Year
INGO	:	International Non-Government Organization
NGO	:	Non-Government Organization
TU	:	Tribhuvan University
UN	:	United Nation
UNDP	:	United Nations Development Programme
UNFPA	:	United Nations Family Planning Association
UNHCR	:	United Nations High Commission for Refugees
VDC	:	Village Development Committee
WHO	:	World Health Organization

CHAPTER I

INTRODUCTION

1.1 General Background

Nepal is a small landlocked country bounded by two large countries, China in the north and India in other three directions. It covers an area of 147,181 square kilometers. Population of Nepal as of the census day (June 22, 2011) stands at 26,494,504 showing population growth rate of 1.35 per annum (CBS, 2012), of which, around 49 percent are women.

Nepal is basically a hilly and mountainous country; about 81 percent of total area is covered by hills and mountains. It is divided into three ecological regions: Terai Region, Mid Hilly Region and Himalayan Region.

Nepalese society has the predominant impact of Indus Valley Civilization. Diverse set of people, in genetics and linguistic terms, live in Nepal. Nepal is a multiethnic and multicultural country with more than 100 spoken languages and cultural traditions. Nepal's cultural contact, in course of her entire history, could be grouped in two broad heads for analytical purposes, namely: the Indian-Aryans living in the Terai plains in the south and the Sino-Tibeto-Burmans populating mostly the Mid-hills and mountains in the north. These are major racial and linguistic groups of people living in co-existence throughout its history of Nepal.

Women from the Tibeto-Burman communities are socially less constrained than their Indo-Aryan sisters in terms of mobility, marriage/remarriage options, and, most importantly, income-earning opportunities. In the Indo-Aryan groups, traditionally, women have fewer social and economic options. Social discrimination against women is felt to be more severe in the Terai communities and in the Mid- and Far-Western Development regions in general. They speak the language of Indo-Aryan, the Tibeto-Burmese family, and some small groups of speaking tribal languages like the Santhal, Satar, Rajbanshi or Coche etc. are also found in different clusters.

Although the influence of Buddhism and Hinduism are dominant, those of other religions like Christianity, Muslim, Shamanism and Bonpo (primitive Tibetan religion) are harmoniously blended in Nepalese culture and civilization. Nepal has been a unique land where various cultures assimilated and where there exists an extreme degree of tolerance.

It is one of the developing countries of the world. Nepal is the country where more than 30 percent of total population is under poverty line and only about 10 percent people being counted under rich people. With per capita income of about US \$340 per year (World Bank, 2009), people find it harder to meet their food and other basic needs due to which they still cannot afford to build earthquake resistant houses. Also, due to lack of awareness, people do not even follow the basic and cost effective construction tips to reinforce their old houses. Hence, many structures have been destroyed by the last earthquake of Baisakh 2072 (March – April 2015 AD).

Women in Nepal are considered as the recipients rather than agents of development. It is only in sixth five-year plan period (1998-1985) that a set of policy directives aimed at increasing women's participation in development was incorporated. Thus, since then the importance of women as active producers contributing to household production and national income has increased.

Women play a significant role in the development of nation. In the past women were considered as second class citizen in most of countries including Nepal. Without women's participation, goals of development activities cannot be fully achieved. So, we can say men and women are the two pillars of development. The role of men and women are interdependent, but women's overall burden is comparatively higher than that of men.

1.2 Statement of the Problem

Women constitute more than 50 percent population of the country, but still they are deprived of equal opportunities in comparison to their male counterpart. Being the male dominant society, men are always encouraged for their betterment of life, whereas women are always discouraged. These differences and gaps between men and women show the condition of women is quite lower than men. This being true for health, education, opportunity, social practices and other aspects has major impact on the living condition of women, and they have been deprived of every opportunity, right and a decent life.

After the earthquake, hundreds of thousands of families became homeless and were living under emergency or temporary shelters, in tents or shelters owned by others and so on. Due to these matters, the vulnerability of women increased. Due to lack of toilets and privacy, women suffered the most, especially during their menstrual period, or women with pregnancy or infants and even other women related with health problems. There were many incidents of

sexual violence, and abuses after the disaster. Women became much more insecure during this period. The disaster had many impacts on social, economic, physical, mental, health and other sectors of women. Despite of having so many laws made on behalf of women, there is still problem in implementing them because of the male domination and false beliefs in the society. Hence, it was necessary to have some mechanisms or preparations or systems in needy places to minimize such problems. To have those mechanisms, it is necessary to have study on socio-economic impact of disaster on women.

However the present research will be guided by the following research queries:-

- i. What is the socio-economic status of women before and after earthquake 2072 in Khokana?
- ii. What are the health problems faced by women before and after earthquake 2072?
- iii. What are the educational problems faced by women before and after earthquake 2072?

1.3 Objective of the Study

The major objective of the study is to analyze the socio-economic impact on women status after the earthquake. However, the specific objectives of the study are:

- i. To examine the present general scenario of the study area after earthquake-2072
- ii. To compare the socio-economic status of women before and after earthquake 2072
- iii. To analyze the health problems after earthquake 2072
- iv. To analyze the educational problems faced after earthquake 2072

1.4 Significance of the Study

Nepal faced the devastating earthquake with the Richter scale of 7.8 on 2072 Baisakh 12 (April 25, 2015). The earthquake had impact not only on physical infrastructures of the society, but also on the social and economic condition of the families especially on women. The women became more vulnerable with this disaster. As the families were living under emergency and temporary shelters with no decent facilities, their bread owners were dead, injured, or their economic condition were deteriorated. Obviously, this disaster had certain impact on every group of societies like men, women, youths, children, etc. But being more vulnerable amongst those groups, this study focuses more on the impact on women. This study will help to find out the impact of disaster on women and how has disaster pushed women backward. This study will also try to identify the problems of women as a first step in solving their problems and helping in uplifting the status of women. Lastly the findings may be quiet useful to policy makers or

institutions, to develop and implement the emergency responses and relief programs effectively, and also it may be helpful for researchers and students as well.

1.5 Scope of Study

This study mainly focuses on the social and economic impact on women from the disaster. The social part includes health, education and household aspects whereas economic part of the study consists of occupation, income and livelihood. This study is focused on status of women of Khokana after earthquake. This study will be helpful in assessing the problems of women after disaster in the communities. This study will provide recommendations to uplift the socio-economic status of women in Nepal.

1.6 Limitation of study

The study is to analyze the socio economic impact on women after the devastating earthquake of the study area. However, it has following limitations:

- i. The study is confined within one village, Khokana, hence, there might be variance while generalizing the data in the perspective of the whole Nepal.
- ii. This study has taken only socio-economic aspects into account; it will not deal with other aspects of the society.
- iii. The research was conducted only for one type of disaster, that is, the earthquake, and cannot be generalized in other type of disasters.
- iv. The research was conducted within limited time period.
- v. It was carried out with limited resources.

1.7 Organization of the study

The study has been divided into five chapters. The first chapter includes general background, statement of the problem, objectives of the study, significance of the study and limitation of the study. The second chapter is related to the review of related literature. The third chapter is presents about the methodology adopted while collecting data. Likewise, fourth chapter is about presentation and analysis of data collected from primary and secondary source from study area. Lastly the fifth chapter is conclusion part of the study. It contains the summary of findings, conclusion and recommendations.

CHAPTER II

LITERATURE REVIEW

The literature review stands in three parts. The first deals on the theoretical review of the study, the second is the analysis of education and women's status and the third is on status of women with reference to Nepal on decision-making power.

2.1 Theoretical Review

Nepal witnessed a 7.8 magnitude earthquake on 2072 Baisakh 12 (25th April 2015) and a 7.3 quake on 2072 Baisakh 29 (12th May 2015), the worst natural disasters since 1900 AD in terms of number of dead, population affected and economic losses. The earthquakes killed more than 9,000 people and affected at least 8 million people. Economic losses are estimated between 3.86 billion US Dollar and indirect losses and macro-economic effects to 10 billion US Dollars, the half of the GDP of the country (19.3 billion US Dollars in 2013) (Source: CEDIM).

The first quake (25th April) was the most devastating, triggering landslides and avalanches in the mountainous areas, and destroying remote villages. The magnitude of the earthquake is similar to the earthquake that shook the country in B.S. 1990 (A.D. 1934), 80 years ago.

Nepal is a sensitive country in terms of earthquakes occurrence and Southern Asia region is also one of world's most quake prone due to the convergence of the Indian and Eurasian tectonic plates. Looking at the historical data of EMDAT, Southern Asia is the second most prone region to earthquakes, after Eastern Asia, with an occurrence of 214 earthquakes since 1900, almost 450,000 casualties and more than 48 billion people affected.

Earthquakes aren't predictable in terms of time and place when they strike, but some areas are more likely to be hit. These are the major cities most prone to damage by an Earthquake.

Table 2.1: Earthquake Prone Places

S.N.	Place	Year in A.D.	Casualties
1	Indonesia	2004	228,000
2	Haiti	2010	230,000
3	Japan	2011	20,000
4	Nepal	2015	8,800

Source: internet

The Table 2.1 shows four major earthquake prone cities of the world in two decades. They are Indonesia, Haiti, Japan and Nepal. Indonesia faced a great earthquake in 2004 which has 228,000 casualties. The devastating Haiti earthquake occurred in 2010 with 230,000 casualties. The frequently earthquake prone country, Japan experienced a dangerous Tsunami with earthquake in 2011 and had 20,000 casualties. Currently, Nepal faced in 2015 with 8,800 and above casualties.

The natural disaster, Earthquake has caused immense damage to life and property. It has not only left thousands of people homeless, but has also ruined the lives of millions across the globe. Earthquakes affect many parts of the world every year. Also, earthquakes further lead to Tsunamis and volcanic eruptions causing even more damage. The world is divided into seismic zones based on the tectonic plates and the magnitude of earthquakes. Here is the 10 most earthquake prone countries in the world and how the quake has caused immense damage in these countries -

Japan

Japan tops the list of the earthquake prone areas. The country has a long history of witnessing disastrous earthquakes since it is situated on the Pacific “Ring of fire”. Due to the subduction of the Philippine Sea plate beneath the Okinawa plate and Amurian plate, Japan has observed a series of several high-intensity earthquakes. On March 11, 2011, a deadly earthquake had shaken the entire country. It was also the costliest natural calamity for Japan. The Fukushima nuclear accident during the earthquake had attracted worldwide concerns.

Nepal

If estimates are to be believed, a citizen in Nepal is more likely to be killed by an earthquake as compared to any civilian in the world. An earthquake of 8.4 magnitude had hit the country in the year 1990 BS (1934 AD). Another recent earthquake of 7.9 magnitude that hit the country on Baisakh 12 2072 (April 25, 2015) caused immense damage to life and property. The iconic Dharahara tower was also destroyed due to the quake.

India

India has also experienced a series of some deadly earthquakes due to the movement of the Indian tectonic plate at the rate of 47 mm every year. Due to the movement of tectonic plates, India is prone to Earthquakes. India has been divided into five zones on the basis of peak ground accelerations. On December 26, 2004, an earthquake followed by a tsunami had killed around 15,000 Indians. Also, on January 26, 2001, an Earthquake in Gujarat had also killed thousands.

Ecuador

Ecuador has several active volcanoes making the country an extremely dangerous for high-magnitude quakes and tremors. The country lies within the seismic zone between the South American plate and the Nazca plate. On August 12, 2014, an Earthquake of 5.1 magnitude on the Richter scale had rattled Quito, which was followed by an aftershock of 4.3 magnitude. 2 people were reported dead and 8 were injured.

Philippines

Philippines lies on the edge of the Pacific plate, which is traditionally a seismic hot zone that encircles the state. In Philippines, earthquakes with high magnitude have led to deadly volcanic eruptions in the past. On October 15, 2013, an earthquake of magnitude 7.1 Richter scale had struck central Philippines leading to more than 100 deaths.

Pakistan

Another earthquake prone country is Pakistan, which is geologically situated atop the Eurasian and Indian tectonic plates. In September 2013, a powerful earthquake of magnitude 7.7 Richter scale had killed over 300 people causing immense damage to life and property.

El Salvador

El Salvador is another earthquake prone country, and has suffered immense damage due to quakes in the region. These quakes have caused several casualties and have led to considerable damage to property. In October 2014, an earthquake of magnitude 7.4 Richter scale had hit El Salvador, 66 miles off the coast. Only 1 casualty had been recorded.

Mexico

Mexico is another earthquake prone country, which has faced several earthquakes of high magnitudes in the past. The country falls in one of the most seismically active area on the surface of the earth. It is situated atop three seismic plates namely, Cocos plate, Pacific plate and the North American plate. Due to the movement of the tectonic plates, volcanic eruptions have also been high. In April 2014, the nation was struck by an earthquake of magnitude 7.2 Richter scale leading to many casualties in Guerrero.

Turkey

Turkey falls within the seismic zone between Arabian, Eurasian and African plates. So, the earthquake can hit the country at any point of time. On Aug 17, 1999, the country was hit by an earthquake of 7.6 magnitude Richter scale. The event lasted for just 37 seconds, and killed around 17,000 people. Over 50,000 people were injured and over 500,000 people were rendered homeless.

Indonesia

Indonesia is quite vulnerable to earthquakes as well as other natural disasters. Quakes have led to immense damages to life and property in the past years. In 2013, an earthquake of magnitude 6.1 Richter scale had struck Indonesia causing 35 deaths.

2.1.1 History of Earthquake in Nepal:

The earthquake of June 7, 1255 AD (1310 BS) is the first recorded earthquake in the history of Nepal. During the earthquake nearly one third of the total population of Kathmandu were killed. Among the killed was the King of Kathmandu valley, AbahyaMalla. The earthquake magnitude at that time is believed to be around 7.7 in Richter scale.

Another big earthquake was recorded in **1260** AD (1316BS) during the reign of King JayadevMalla. During the earthquake many buildings and temples collapsed. There was a huge loss of lives and an epidemic and famine after the earthquake was attributed to the natural disaster.

The prime minister, JuddaShamsher J. B. Rana announcing the relief efforts during the earthquake of 1934.

In August (or September) of **1408** AD (1463BS), during the reign of king ShyamSingh, a major earthquake destroyed the temple of RatoMatchendranath and many other buildings and temples.

Very little information is available about the earthquake that happened in December of **1681** AD (or January of 1682) i.e. 1737BS. King Sri NiwasMalla ruled at the time.

In the months of June and July of **1767** AD an earthquake of significant intensity was felt in Nepal. Much information about the earthquake is not available.

In the earthquake that happened in May/June of **1810** AD (1866 BS) many buildings and temples were damaged. Loss of lives was limited to a few but it was told to comprise of twenty one shocks and aftershocks. The King GirbanYudhaBikram Shah was ruling Nepal at that time.

In the year **1823** (1880 BS) seventeen shocks and aftershocks were of various magnitudes were felt in Katmandu valley. There however was no report of loss of human lives.

In the months of August or September of **1833** AD (1890 BS), two major earthquake hit Kathmandu valley. It was during the reign King RajendraBikram Shah Dharaha, the tallest building in valley, was also severely damaged. The first shock was felt at around 6 pm and the second one was around 11 pm in the night. The second shock was the deadliest as most of

the valley residents were asleep. Numerous houses, temples, and public shelters had collapsed during the earthquake. Thimi and Bhaktapur were completely destroyed. It was reported that 4214 houses were collapsed in Kathmandu Valley. All over the country 18000 houses were reported to have collapsed.

During June and July of 1834 AD (1891 BS) four major earthquakes were reported. Although this earthquake was less severe when compared to the earlier year's earthquake, the rain during the earthquake caused flooding in Bagmati River – washing bridges and sweeping crops planted on the fields near the river banks.

The deadliest earthquake on record – popularly known as "**90 Sal koMahabhukampa**" occurred during Magh of **1990 BS** (16 January, 1934 AD). The earthquake is also known as Great Nepal Bihar Earthquake, occurred at around 2pm. The magnitude 8.4 Richter scale earthquake killed 8519 people, destroyed 80893 buildings and severely damaged 126355 more houses. At that time the government spent NRs 2,06,500 through the earthquake relief fund in Kathmandu valley alone. The earthquake relief fund established by the king offered loans to the earthquake effected people.

An earthquake in 1974 (2031 BS) wasn't that severe as only one building was reported to have destroyed in Nuwakot during the earthquake. Another earthquake of 6.5 Richter scale happened in 1980 (2037 BS) that affected the far western region of Nepal. The most affected districts included Baitadi, Bajhang, and Darchula. In the earthquake 125 people died, 248 were seriously injured, 11,604 buildings were destroyed, 13,414 buildings were damaged. A heavy loss of livestock was also reported.

The earthquake of **1988 AD** (2045 BS), known as Udayapur Earthquake mainly affected the Eastern Development Region and some parts of Central Development region. It caused 721 deaths, 6553 injured, and damage to 64174 private buildings, 468 public houses, 790 government buildings. Death of 1566 live stocks and a total direct loss of 5 billion rupees was reported. The World Bank provided a loan of Nepalese Rupees 1 billion to the affected people.

The earthquake of 1993 AD (2050 BS) mostly affected the Central and Mid Western region killing 1 person dead, injuring 11 and it destroyed 72 houses with a loss of 48.39 million rupees. The earthquake of the next year, 1994 (2051 BS) was not fatal but injured 12 people. The 1995 (2052BS) centered in Mid Western Region- Dailekh, was also non fatal. The

earthquake of 1997 (2054 BS) was focused in Central and Far Western region. In the earthquake 1 person was injured, 196 houses were destroyed, and 60 more were damaged.

The earthquake of 2001 (2058 BS) left 2 dead and destroyed 3 houses. The earthquake of 2002 (2059 BS) injured 41 people. 2003 (2060 BS) earthquake affected Syangja and killed and injure two more. The earthquake of 2011 (2068BS) had killed 5 people and injured more than 27.

The latest earthquake is in April 25th 2015 measuring 1.9 on the Richter and 12th May 2015 measuring 7.3 on Richter scale, which was followed by 97 aftershocks of magnitudes 3.0-6.9 on Richter scale, where more than 9,000 people were killed, 22,220 people injured and flattened thousands of buildings besides destroying whole villages in affected area. In Nepal, Over 5, 00,000 houses were destroyed and 2,69,000 were damaged by the earthquakes and hundreds of thousands of people were still staying in temporary shelters. More than 8, 64,000 affected people, who lived in remote mountainous area, have lost their relatives and houses. (UN report)

2.1.2 The Impacts of Earthquakes

Some of the common impacts of earthquakes include structural damage to buildings, fires, damage to bridges and highways, initiation of slope failures, liquefaction, and Tsunami. The types of impacts depend to a large degree on where the earthquake is located: whether it is predominantly urban or rural, densely or sparsely populated, highly developed or underdeveloped, and of course on the ability of the infrastructure to withstand shaking.

As we've seen from the example of the 1985 Mexico earthquake, the geological foundations on which structures are built can have a significant impact on earthquake shaking. When an earthquake happens, the seismic waves produced have a wide range of frequencies. The energy of the higher frequency waves tends to be absorbed by solid rock, while the lower frequency waves (with periods slower than one second) pass through the solid rock without being absorbed, but are eventually absorbed and amplified by soft sediments. It is therefore very common to see much worse earthquake damage in areas underlain by soft sediments than in areas of solid rock. A good example of this is in the Oakland area near San Francisco, where parts of a two-layer highway built on soft sediments collapsed during the 1989 Loma Prieta earthquake

Building damage is also greatest in areas of soft sediments, and multi-storey buildings tend to be more seriously damaged than smaller ones. Buildings can be designed to withstand most earthquakes, and this practice is increasingly applied in earthquake-prone regions. Turkey is one such region, and even though Turkey had a relatively strong building code in the 1990s, adherence to the code was poor, as builders did whatever they could to save costs, including using inappropriate materials in concrete and reducing the amount of steel reinforcing. The result was that there were over 17,000 deaths in the 1999 M7.6 Izmit earthquake (Figure 11.18). After two devastating earthquakes that year, Turkish authorities strengthened the building code further, but the new code has been applied only in a few regions, and enforcement of the code is still weak, as revealed by the amount of damage from a M7.1 earthquake in eastern Turkey in 2011.

Fires are commonly associated with earthquakes because fuel pipelines rupture and electrical lines are damaged when the ground shakes. Most of the damage in the great 1906 San Francisco earthquake was caused by massive fires in the downtown area of the city. Some 25,000 buildings were destroyed by those fires, which were fuelled by broken gas pipes. Fighting the fires was difficult because water mains had also ruptured. The risk of fires can be reduced through P-wave early warning systems if utility operators can reduce pipeline pressure and close electrical circuits.

Ground shaking during an earthquake can be enough to weaken rock and unconsolidated materials to the point of failure, but in many cases the shaking also contributes to a process known as liquefaction, in which an otherwise solid body of sediment is transformed into a liquid mass that can flow. When water-saturated sediments are shaken, the grains become rearranged to the point where they are no longer supporting one another. Instead, the water between the grains is holding them apart and the material can flow. Liquefaction can lead to the collapse of buildings and other structures that might be otherwise undamaged. A good example is the collapse of apartment buildings during the 1964 Niigata earthquake (M7.6) in Japan. Liquefaction can also contribute to slope failures and to fountains of sandy mud (sand volcanoes) in areas where there is loose saturated sand beneath a layer of more cohesive clay.

The economic losses could be as much as US \$10billion, according to an estimate from US Geological Survey. The cost of rebuilding is US \$5billion, according to IHS. All these in a country with economic growth that was already expected to slow, with an unemployment rate

of more than 40 percent, and a reliance on agriculture, tourism and remittances to support its \$19bn economy.

The last earthquake, we experienced, is in Baisakh 12, 2072 (April 25th 2015) measuring 1.9 on the Richter and Baisakh 29, 2072 (12th May 2015) measuring 7.3 on Richter scale. More than 100 aftershocks of magnitudes 3.0-6.9 on Richter scale followed, where more than 9,000 people were killed, 22,220 people injured and flattened thousands of buildings besides destroying whole villages in affected area. In Nepal, Over 5, 00,000 houses were destroyed and 2,69,000 were damaged by the earthquakes and hundreds of thousands of people were still staying in temporary shelters. More than 8, 64,000 affected people, who lived in remote mountainous area, have lost their relatives and houses. (UN report)

A number of old temples, pagodas and churches in the Kathmandu valley were razed. Several temples including Manakamana Temple at Gorkha, JanakiMandir at Janakpur; Kasthamandap, Panchtale temple, Basantapur Durbar, the DasaAvtar temple and the Shiva Parvati temple were demolished. The Kumari Temple and the TalejuBhawani Temple partially collapsed. Some portion of the Jaya Bageshwari Temple at Gaushala, Pashupatinath Temple, Swyambhunath, BoudhanathStupa, RatnaMandir and Rani Pokhari had been destroyed. The Char Narayan Mandir, the statue of YogNarendraMalla, the Taleju Temple, the Hari Shankar, Uma Maheshwar Temple and the Machhindranath Temple in Bungamati were destroyed. In Tripureshwar, the KalMochanGhat, a temple inspired by Mughal architecture, was completely destroyed and the nearby Tripura Sundari also suffered significant damage. In Bhaktapur, several monuments and Temples were totally destroyed.

2.2 Women Education in Nepal

Education plays a key role in the development of an individual. It is one of the major degrees to measure the social status of any community. Moreover, education for women is so important it helps them to improve their status in the community. Generally, the level of education is the indicator of the social status of women.

But still there are differences on education of male and female in several aspects. Historically, Nepali laws have favoured men over women. In education, both the low level of women and the gender gaps in literacy rate, enrollment rates, and attainment rates are staggering. When resource constraints arise in the household, the first casualty is the female child's education.

According to the CBS 2011, the literacy rate of Nepal is 65.9 percent. The female literacy rate has jumped from 35 percent to 57 percent in one decade which is seen as a significant improvement but comparing with the literacy of male, that is, 75 percent there is still a big gap between the two genders.

Regarding the education system of Nepal, women are still backward from different perspectives despite the introduction of several rules and regulations, plans and policies to increase the women literacy rates. In specific to political representation, Article 63 of the Interim Constitution of Nepal 2007 enshrines the principle of inclusiveness while selecting the candidates by the political parties and to ensure proportional representation of women, Dalit, oppressed tribes/indigenous tribes, backwards, Madhesi and other groups. Whatsoever, in case of women, at least one third of total representation should be obtained but the situation in real practice is otherwise. Proportion of seats held by women in the national parliament was just 3.4 in 1990 whereas it is 29.9 in the present Constituent Assembly.

It is said that if a woman is educated and empowered, the entire family and society will be developed. So it is the most imperative need to provide women skills and knowledge to take advantage of the many opportunities available to them and help them improve their living standards. Providing women with the opportunities of education, job training and basic services to ease household responsibilities are the ways to empower women. When women become more knowledgeable and acquire skills, they can accomplish a great deal.

Women in the developing countries are often denied opportunities for education. Lack of education limits prospects, decreases family income, increases health risk, puts women at risk of trafficking and exploitation, and limits the economic advancement of entire countries. Each day we get to hear and read news about the incidences of gender based violence and discrimination against women. There are deep rooted social and cultural practices like child marriage, dowry system, gender discrimination and many more. For solving these types of problems like lack of women in decision-making bodies, lack of political power or political commitment, unequal payment, deep rooted gender discriminatory value system education should be addressed. Devkota, S. et al (TRN: Thursday, 22nd March 2018)

For the production of qualitative and rationale human resource education is a must. Devkota, again writes that women should be provided access to or create new educational, financial, and social resources in their communities and should be supported to become entrepreneurs,

which will help them improve their own lives, the lives of their families and the conditions in their communities. For parents and especially mothers these opportunities will help in creating conditions that ensure their daughters have equal access to basic education, are able to make informed decisions about their futures, and are able to protect themselves from trafficking, sexual exploitation, HIV etc. Educating women will surely help in maintaining peace and security, and narrowing the widening gap between the haves and have-nots.

According to the FAO (2010), around 12.6 percent more women than men are involved in the agriculture sector, while Action Aid (2013) reports that Nepalese women work in average of 11 hours per day whereas Nepalese men work an average of 8 hours per day.

2.3 Status of Women in Decision-Making Power

Decision-making power is the ability to influence decisions that affect one's life – both private and public. Formal access to positions of authority and to decision-making processes is an important, if insufficient, condition for women to have decision-making power in the public domain. In fact, decision-making power is a composite of access, capabilities and actions that shape whether women have influence over the polity or decisions about their private life. Having influence with, over and through people and processes is therefore central to both leadership and decision-making power. O'neilet *el* (2015).

As women's work in the farm and other sectors, except in the organizational services, is unpaid and takes place within a traditionally and concentrated framework, their contribution is classified as "family labour" and the women themselves as "housewives" or "economically not active". This is a disability which many farming women may feel the least, but which diminishes awareness of them and their work at planning policy and legislative level, for example, in the budget of development programmes.

Women in Nepal hold the multiple work responsibilities. Apart from the responsibilities of reproduction and caring children, women involve in household chores, serving household members, farming and cattle rearing, domestic and employment. Women suffer from discriminatory practices in opportunities for good education, nutrition, health, employment and many more. Personal mobility in the process of skill development and independent decision making is highly restricted. Low economic earning opportunities and highly dependency on family has limited the role of women in decision making about all the

allocation of household income. Lack of decision making power has deprived women in compare with men for the basic elements of decent life, such as, food and nutrition, education and skill development, health and family planning etc. (UNDP, 1998).

The status of women is an important factor affecting the socio-economic development of a country, but it cannot be fully realized if women who usually constitute 51 percent of the total population enjoy a subordinate position to men. Therefore, the fact that women as oppressed and suppressed lot still persists. This is reflected in almost all aspect of their lives including their powers of decision making in the household. Decision making power is also an important aspect, which measures the relative status of the household's members. Although women have access to decision making in some ordinary matters, they still remain excluded from important decision making.

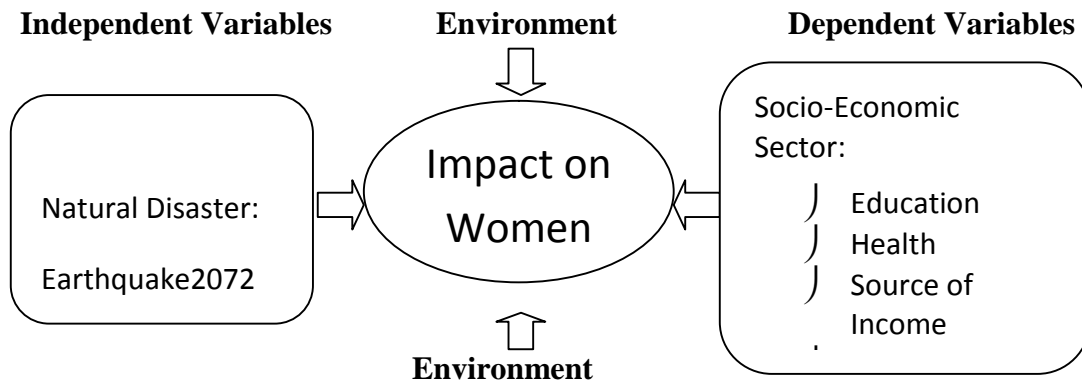
Household income, workload for girls, and the level of concern of parents with the purity of the female body which leads to their early marriage, are important variables in decision making regarding sending girls to school.

As pointed by Bennet (1981), the role of women in household decision making and the allocation of household resources depend upon a number of factors. These factors include type and consumption of the household, age and life style of women and the number of household males absent from village.

2.4 Conceptual framework

An attempt has been made to develop a conceptual framework for the present study by identifying possible factors that determine the level of decision making power of women in the family and society. The framework included natural disaster of earthquake 2072 as the 'independent variable'. The 'independent variable' influences the socio-economic status of women; therefore, the factors like education, health and income are taken as independent variables. However, this study did not make any attempt to empirically verify the relationship between the 'independent variable' and 'dependent variables'. There had been no attempt to formulate the envisaged relationship in the form of hypothesis for testing. The conceptual framework had been taken as only an abstract frame of reference for the description of the issues under study, that is, socio-economic impact of earthquake in women.

Figure - 1: Conceptual Model of the Study



Above conceptual model of the study (Figure 1) shows the relationship between independent variable and dependent variables. It shows the natural disaster of earthquake 2072 is an independent variable and it affects dependent variables of socio-economic sectors, such as, education, health, source of income and family income. Due to earthquake 2072, many people lost their lives, a lot of students drop out their education, people lost their houses, they lost their jobs and usual works which affects on their family income.

CHAPTER III

RESEARCH METHODOLOGY

Methodology is the backbone of the study. So, it needs to be well defined to conduct the study. In this study, the following methodology has been adopted to fulfill the objectives.

3.1 Selection of Study Area

Khokana lies in the south of the Kathmandu Valley. People in Khokana are living in agricultural community. It is popular for producing mustard seed and local mustard oil. We can see plenty of terraced fields in the inner settlements. Now, it became one of the cities among the Karyabinayak Municipality. In addition to this, Khokana is very close to the Lalitpur Metropolitan City (the then Sub-metropolitan City) and very dense area. The place was emerging city from a village to an urban area, hence, it consisted both the features of a village and a city. It has families with rural and urban lifestyle. The infrastructures and housing structures are very dense and there are more people living in poor condition.

After the entrance of new year 2072 BS, two great earthquakes occurred in Nepal, one on 12th and another on 29th of Baishakh followed by hundreds of quakes below 4 Richter in magnitude scale. The natural disaster is termed as Nepal Earthquake 2015 or Gorkha Earthquake. The earthquake has cause massive damage over more than 14 districts of Nepal and out of which 11 are among the worst hit. Khokana is one of the city that has been worst affected by the earthquake. Khokana is a very appropriate area for the study as this is one of the very important historical sites which suffered great damage of property and deaths of peoples. Due to which Khokana has been selected as the study area which can be generalized for the rest of Nepal in one way or the other.

3.2 Research Design

This study attempts to explore and investigate the socio-economic and decisional power of women in the society, so, it is an exploratory as well as descriptive type of study. As the study is designed to describe the socio-economic impact of earthquake 2072 in women, this study used descriptive research design.

3.3 Nature and Source of Data

Data is a set of fact, sheets the wholesome aggregate of which gives the information. This information is fact that contributes to the inquiry of truth and approaches towards the reality. The sources of data used in the study are both primary and secondary. These primary and secondary data are obtained during the beginning period of the study.

Data gathered are quantitative as well as qualitative in their nature. Some quantitative data are recorded from various persons and organizations, but some are in qualitative as well. But for the convenience of the study and analysis of data, some qualitative data are converted into quantitative accordingly.

This research was conducted by employing various methods for data collection. Both primary and secondary data were collected. The primary data necessary for the study were collected directly from the field through the processes of individual surveys, KII and FGD. The secondary data were collected from the previous studies, published and unpublished materials, internets, journals and other possible literatures as per the necessity. The data are taken from various sources, they are mentioned below:

1. Primary and Secondary Data

- a. Primary data: Interview with some general informants, key informant interview, survey by questionnaire etc.
- b. Secondary data: Books, magazines, newspapers, monograms, research reports, articles, thesis etc.

2. Quantitative and Qualitative Data

- a. Quantitative data: Questionnaire and institutional publications and also non published materials.
- b. Qualitative data: Questionnaire and interviews

3.4 Data Collection

The data have been collected from the field survey through various techniques such as questionnaire, interview with key informants and observation method. The structured

questions were asked directly to the married women to get information about the women's education, employment, property ownership status and their decision making power.

3.4.1 Universe, Sample and Sampling Procedure

During the field survey 2074, the ward committee of Khokana, reported that there were 1,056 households with the population of 4,778 as depicted by their household survey done in 2068 (2011 AD). Number houses damaged massively in earthquake 2072 were 837. Similarly, 4 major temples, 1 school, and 3 other sort of buildings like Pati, Satal etc. [According to National Population and Housing Census, 2011, the total number of households in Khokana is 1,304 with the total population of 5,966 (Household Survey, 2015).]

Almost all of the household have suffered from the earthquake one way or the other. 837 households of Khokana were massively damaged and considered as the universe of this study. Among the 837 households, 8 percent i.e. 64 household were selected as sample. Since, 64 questionnaires were responded.

Table 3.1: Sampled Households

S.No.	Total Households	Household affected by earthquake	Sampled house	Sampled Percentage
1	1,056	837	64	8%

As the study targeted women, respondents and locations were selected using purposive sampling (the snowballing technique) in collection of data by the researcher. Only married women were taken as respondent

3.4.2 Methods and Tools of Data Collection

The various methods of data gathering involve the use of appropriate recording forms which are called tools or instruments of data collection. Several techniques were applied to collect data in this study. Household survey questionnaire, direct interview and observation were

used to collect the data. Later, the complete responses were sorted for the convenience of the study.

Household Survey Questionnaire

To collect the primary data, household survey was done by filling up the structured questionnaire. And some unstructured questions are used by the researcher to interview with randomly selected women and men, or in the absence of them, other senior persons, present at the home, were taken as the respondent.

Key Informant Interview

Key informant interview is loosely structured conversations with the people. To dig out its major key informant's interviews were conducted within the study area. The key informants were municipality staff, social mobilizers and local leaders, teachers of the school and some active people.

Observation

Observation method had been used to collect the observable information. The data collection through observation was used to support the structured data in relevant place in the text. Human nature is basically hesitating to explore their weakness so it helped to collect this information.

3.5 Data Processing and Analysis

The collected raw data were molded as per the requirement and objectives of the research. These data were explained literally and also stated in various graphic presentations. The data analysis was made by generating the tables of averages and percentages.

3.5.1. Data Processing

Data process needs various steps to be followed. In the beginning, questionnaires filled out with the help of a data enumeration team. The data collected are sorted to select the completed questionnaires. Then they were gone through many steps. The steps are:

- a. Editing
- b. Coding
- c. Classification
- d. Tabulation

3.5.2 Data Analysis

All the collected data were analyzed systematically and scientifically by using different statistical tools. The data have been transcribed into excel texts to ease the data analysis

Primary data were analyzed according to its nature, so as to address the objectives of the study. Various tables and figures were utilized for classifications and the data have been analyzed by using simple and suitable mathematical and statistical tool like tabulation, Percentage, Mean, and other graphical presentations like pie chart, bar diagram etc. have been employed. Apart from them, other graphs interpreting the analysis were presented.

CHAPTER IV

PRESENTATION AND ANALYSIS OF FIELD DATA

4.1 Profile of the Study Area

Khokana is a former Village Development Committee (VDC) which has been merged with the neighbouring VDCs of Bungamati, Chhampi, Dukuchhap and Sainbu to form the municipality of Karyabinayak. Khokana lies in Lalitpur District, one among the eight districts of Bagmati Zone. Khokana lies south of the Kathmandu Valley in Central Development Region of Nepal. This is a beautiful Newar village, one of the culturally significant villages in the Lalitpur district. It is only 10 kilometer far from the capital city. It is bounded by other cities like Bungamati in the east, Sainbu-Bhainsepati in the north, Swakhel in the south and Chobhar, Bhutkhel, Bosan and Bagmati in the west. Khokana consists of two parts: Ta-Khokana (big) and Chi-Khokana (small); the main Khokana is Ta-Khokana. An open place called, Shikhali Khyo, is situated in the middle of Chi-khokana and Ta-Khokana. There are black topped roads to reach Khokana one from the Chichoof Bhainsepati and another from the Jawalakhel of Bungamati. There are public buses operated from Ratna Park of Kathmandu and Lagankhel of Lalitpur up to bus-park of Khokana. Lots of private vehicles and taxis found arrive from different place to Khokana now.

Khokana is situated within the latitude of about 27.64' to 28.50' North and longitude of about 85.14' to 85.26' East. The altitude of the city is about 457 meter from the sea-level. Khokana is somewhat plain, but steep sloped area and some rocky lands are also seen in the inner area. Relative humidity is 50 percent to 80 percent and average annual rainfall is 1232.6 milliliter. Average temperature is maximum 23.60° Celsius and minimum 10.70° Celsius. There are eight ponds in the village, which are used for various socio-cultural and economic purposes.

In the tentative list of the World heritage site of UNESCO, Khokana is described as, "Khokana is a unique village which can be taken as a model of a medieval settlement pattern with a system of drainage and Chowks. It houses Chaityas and a Mother Goddess temple. The mustard-oil seed industry has become the living heritage of the village."

There are some places of worship and stone sculptures along the route, providing it with some religious meaning. Shree Rudrayani Temple is located in the center of the Southern

Settlement Region. It has so called Newar architecture, and it is a three-story temple. It forms a central ritual space of the village, together with the adjacent pagoda, pond, watering place (Hiti), and rest place (Pati), and the KwoeLachhiChowk (KhwelacchiChok) down towards the west. The Nyala Dan Street (hereafter called the main street) running east to west is the central axis joining these two spots (Rudrayani Temple and KwoeLachhiChowk). There are comparatively many traditional Newar-style dwellings nearby that, together with the Rudrayani Temple, leave behind the visage of the medieval period. Near the entrance of the village, there are two mustard oil factories that are said to have been established as guard points.

We can see women involved in farming in the traditional way, clothes in the tap or in the pond, men weaving mats and children playing in the narrow lanes. Being the old city, Khokana is the settlement possessed of huge social, cultural and economic values.

Khokana is a living, cultural museum reflective of medieval times. But, the earthquake of April 25, 2015 took its life away. The old and traditional Newar houses are now just rubble. Most of the remaining houses are supported by bamboo and wooden logs from the outside.

It is a farmer community village, producing mustard seed and other agro-products and popular for making local mustard oil. We can see plenty of terraces farmed in the surrounding settlements. We can see mostly women involved in farming paddy in the traditional way, washing clothes in the tap and ponds and weaving mats; men, being dominant in the society, are involved mostly in direct earning activities like business or service in organizations and many in farming; children are found playing in the narrow lanes or staying with old people in the settlements.

4.2 Mythology of Khokana

The settlement of Khokana and Bungamati were established at the ruling period of Narendradev (Nepal Sambat 67-103). The chronicles tell the story of entrance of AdiloshwarMatsendranath to Nepal at his period. The ancient name of Khokana is Jitapur, an old temple like monument called *Gancha* symbolizing Jitapur is still found.

Regarding nomenclatures of Khokana, various myths are told. One of the most believed by the city dwellers is related with Buddhist deity Kamal Rudra Verna Avlokiteshwar (Lokeshwar), whom the villagers pay great respect. Once the deity was migrated to a village

where, at that time, *Mohani* (Dashain) was being held as usual by sacrificing lots of animals and fowls. The peace loving god felt irritated by such brutal killings as he follows the principle of non-violence. He, then, left the place and settled in this village, which was known as "Kudesh" and where no killings take place in those days. He entered this village weeping with great pain not tolerating that sort of violence. Symbolizing that weeping spirit, the work "*Kho*" is introduced into the name of the village meaning weeping or tears in Nepal Bhasa; later "Khokana" was termed.

Old city people believe that they were migrated from the JaiseDega of *Yen* (Kathmandu). Their direct relationship with PachaliBhairabJatra of Yen stated its reality. At the time of Mohani, when PachaliBhairab of *Yen* ascends the temple the Bhairab of Khokana descends from its temple (Shakya, 1994 & Bajracharya, 1994).

4.3 General Scenario of Study Area after Earthquake 2072

Khokana is a beautiful Newar village and is regarded as a living cultural museum reflective of medieval times. But, the earthquake of April 25, 2015 took its charming life away. The old and traditional houses are now rubble. Most of the remaining houses are supported by bamboo and wooden logs mostly from outside.

There was no damage to 94 % of the surveyed RC buildings. From the comparison of structures made from brick-mud mortar (BM) and brick-cement mortar (BC), the collapse ratio was improved by 16 percent in Khokana for BC houses. There was zero percent BM Well with very heavy structural damage in this area. (National Research Institute for Cultural Properties, Tokyo 2016)

Almost all houses had collapsed completely in the 1934 earthquake, and these had then been reconstructed. The historical settlement of Khokana suffered severe damage; in particular, the northern half of the main street suffered large-scale damage. Their original structures suffered from many problems such as shared partition walls between houses and brick walls with poor strength. The strength of some houses seemed to have deteriorated owing to division and rebuilding. The Kokhana Reconstruction and Rehabilitation Committee led by the local youth is acting vigorously for reconstructing the historical townscape.

4.4 Socio-economic Profile of Respondent Women

As mentioned in the methodology, the study was conducted in Khokana in small scale selecting sample population 64 married women. The socio-economic status of the respondents had been studied and analyzed. The findings of the study, in some aspects of the respondents concerning socio-culture and economy, are interpreted in this session. It includes some socio-economic variables that directly or indirectly affect socio economic status of women like major occupation or employment, loan and property ownership, source of income and expenditure and household decision making role of the respondents etc.

4.4.1 Age Structure

The married females have to lose all their freedom and rights. Only married women of age group 25 and above were the respondent of present study. Marital status is also a social indicator for understanding the socio-economic status of women. Marriage changes the women's status. It also changes the women's role and increases the duties and work load of the women. It is through the marriage that women change their status of daughter to daughter in law.

The 64 married women selected as informants were categorized in four groups; between 25 years of age to 60 above. It is represented in the following Table.

Table 4.1: Distribution of the respondent on the basis of Age Group

S.No.	Age Group	Number of Respondents	Percentage
1	25 – 35	32	50.00
2	36 – 45	17	26.56
3	46 – 55	7	10.94
4	Above 55	8	12.50
	Total	64	100

Source: Field Survey, 2074

The above table shows that out of 64 sample household, half (50 percent) of the total respondents were found to be fall under the age group of 25 to 35 years. They are 32 in number. Similarly, 17 respondents or 26.56 percent were from the age group of 36 to 45. The women aged between 46 to 55 years were 7 in number, that is, 10.94 in percentage. The senior women with the age above 55 years of age were found 8, that is, 12.50 percent.

Hence, the first age group of 16 to 25 was the most fertile reproductive strata. They are sensible for change and effective decision makers.

4.4.2 Family Structure

The impact of natural disaster depends upon the type of family structure also. A joint family system is most congested with bigger house and land holdings in size in general. But, the decision making power may be distributed in different level and sectors of the family. A joint family has more family members while a nuclear family has 2 to 6 members only, consisting of a couple probably with some children. The following Table 4 shows the distribution of respondents by family type:

Table 4.2: Distribution of the respondent on the basis of Family Structure

S.N.	Family type	Number of respondents	Percentage
1	Joint Family	34	53.13
2	Nuclear Family	30	46.87
	Total	64	100

Source: Field Survey, 2074

Almost allof the Newars live in joint families in villages. The present study shows that nuclear families are growing inKhokana. Thirty four respondents out of 64were from nuclear families type.That mean 55.13 percent respondents were living in joint families. Thirtyof them(46.87 percent) were livingin nuclear family system.

In nuclearfamily, decisionmakingrole and othersocio-economicindicatorare higherin comparisonwith the joint family.

4.4.3 Involvementin Various Sectors before and after Earthquake 2072

Women's involvement in various sectors determines the degree of freedom and capacity in decision making. The social status of women depends on in which sector female family members are involved. If they spend their time only in household chores, they do not possess higher status in the society, so is their decision making capacity except in the field they involve.Below, the Table, reveals the involvement fields of female member the respondent.

Table 4.3: Distribution of the respondent on the basis ofInvolvement inInstitutions

S.No.	Institutions	Before Earthquake		After Earthquake	
		Number	Percentage	Number	Percentage
1	Government	0	0.00	1	1.56
2	Private	8	12.50	8	12.50
3	Health (Local)	4	6.25	8	12.50
4	Socio-Cultural	20	31.25	21	32.81
5	None	32	50.00	26	40.63
	Total	64	100	64	100

Source: Field Survey, 2074

According to the table given above, none of the female respondents were involved in government sector before the earthquake. Eight respondents (12.50 percent) reported their involvement in private sectors. Their involvement was in private institutions like cooperatives or in small income generating activities. Similarly, four of the respondents (6.25 percent) were engaged in local health organizations like health worker or trained volunteer. Half of the respondents (32 in number or 50 percent) reported not involved in organizations except in their household chores or farming works. Twenty women out of 64 (31.25 percent) were reported to be engaged in their social, cultural and other groups formed in Khokana before the incident.

But after the earthquake, one woman became selected in the local government authority as the ward member. The local health volunteers/workers also became double of the former number that means increased by 6.25 percent. The none-involved women were decreased by the same percentage. Similarly, one woman was increased in the involvement of the socio-cultural institution.

4.4.4 Income Source

Most of the activities of the family members revolve around the income of the family. The income sources are defined by the earning field of the households. As the city being agricultural community, people comprised farmers and some other field workers.

Table 4.4: Main Source Income of Respondents' Households

S.No.	Main Income Source	Number of Respondents	Percentage
-------	--------------------	-----------------------	------------

1	Farming	42	65.62
2	Service in Office	2	3.13
3	Remittance	0	0.00
4	Business	6	9.38
5	Wage Labour	14	21.87
	Total	64	100

Source: Field Survey, 2074

The above table shows that a majority of the household depend on agricultural income, 65.62 percent of the responded household's (42 in number) main income is farming. Out of 46 respondents only 2 (3.13 percent) of the respondents' main income source is service in organizations. No one had remittance income as main source. Six among 64 women (9.38 percent) respondents family had business as income source. Fourteen out of 64 (21.87 percent) respondents had wage labour as income source. Their family members work as salesman, carpenter and some women as tailors or general workers.

4.4.5 Status of Income and Expenditure before and after earthquake 2072

However, the amount of income and expenditure alone cannot reveal the overall economic condition of the households, particularly in the cases of poor families. Hence, the overall economic situation was taken into consideration. So, the household income or expenditure amount was assessed in relation to the food sufficiency also. The agricultural farming income if sufficient for the whole year, is termed as sufficient, otherwise deficit. Surplus household income plays significant role in women empowerment and decision making. Below, Table gives the household income/expenditure of the respondents.

Table 4.5: Income and Expenditure of Respondents

S. No.	Status	Number of Respondents				Change	
		Before	Percent	After	Percent	Number	Percent
1	Surplus	40	62.50	8	12.50	32	50.00
2	Balance	24	37.50	30	46.88	6	9.38
3	Deficit	0	0	26	40.62	26	40.62
	Total	64	100	64	100	64	100

Source: Field Survey, 2074

The table, given above, shows that after the earthquake, only 8 households out of 64 respondent households had surplus income, that is, only 12.50 percent had income exceed over the expenditure. Before the earthquake, it was revealed that 62.50 percent of the households had sufficient surplus. They were able to build new house or spend excess money in renovation of house or other social activities. Thirty out of 64 could balance their income and expenditure. It means 46.88 percent of the respondent households had sufficient income to cover their expenditure; they have neither in surplus nor in deficit situation. The balance households are increased by 9.38 percent as the surplus holders were decreased by 50 percent. Similarly, 26 out of 64 (40.62 percent) respondent households had to deficit to meet the expenditure on the whole year. This deficit holders' portion was increased by 40.62 percent.

4.4.6 Change in Income after the Earthquake

The earthquake occurred in 2072 was one of the greatest natural disasters happened in the century. It had great impact in the social and economic sector of the country. This study intended to assess the livelihood of women in Khokana city. Lots of people died, some lost their body limbs, physical property, income source and others due to the earthquake. Some became so severe that they faced heart and mental problems as their condition became unbalanced.

Below, Table depicts some lose in regular income of the households of the respondents.

Table 4.6: Decrease in Income of Respondents after the Earthquake

S.No	Income in Rs. / month	Decrease after Earthquake	
		Respondents	Percent
1	No change	38	59.38
2	10,000 and below	20	31.25
3	10,001-20,000	4	6.25
4	20,001-30,000	2	3.06
5	30,000 above	0	0
	Total	64	100

Source: Field Survey, 2074

Even though many of the respondents (59 percent) reported that their money income were not altered, more than 31.25 percent (20 out of 64) respondents faced problem of decrease in their monthly income of Rs. 10,000 or less. However, only two respondents accepted the decrease in their monthly income of Rs. 20001 to Rs. 30,000.

4.4.7 Loan after Earthquake

People in the city were afraid of taking loans from bank and other financial institutions. Before the earthquake, only four the respondents had taken small loans from such institutions. But, after the earthquake, many of the respondents had taken loan and debt from banks, finances, cooperatives and some had taken personally from comparatively rich people or nearest relatives. These loans were taken mainly for the construction, reconstruction or

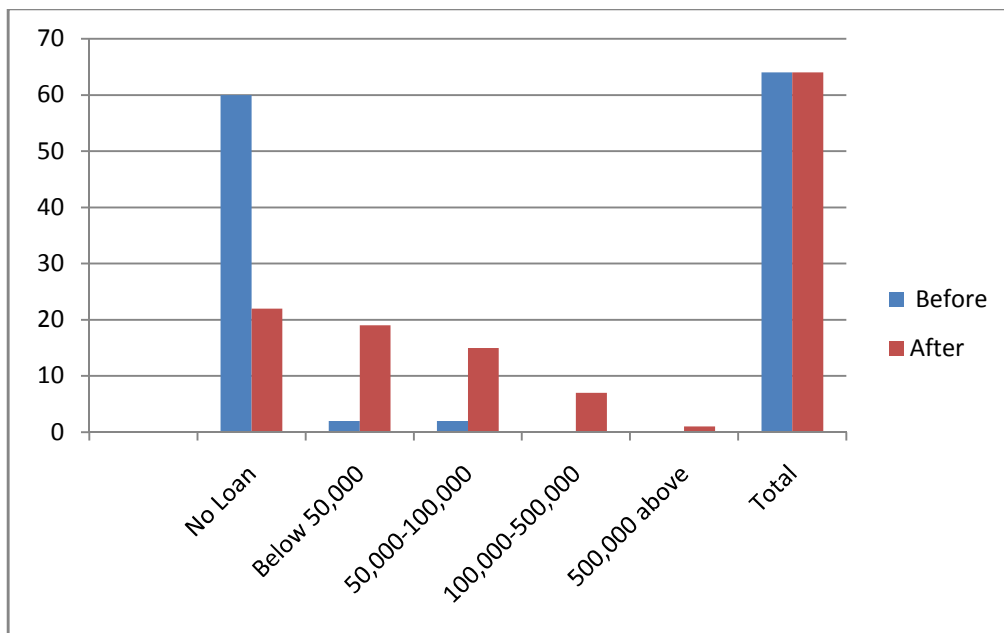
renovation and other reasons related with houses. The following Table gives the status of indebted respondents households.

Table 4.7: Loan of Respondent Households

S.No.	Loan (Rs.)	Before		After	
		Number	Percent	Number	Percent
1	No Loan	60	93.75	22	34.37
2	Below 50,000	2	03.12	19	14.06
3	50,000-100,000	2	03.12	15	23.44
4	100,000-500,000	0	0	7	26.56
5	500,000 above	0	0	1	01.56
	Total	64	100	64	100

Source: Field Survey, 2074

Figure 2: Loan of Respondent Households



Source: Field Survey, 2074

The table and figure shows that more than 90 percent of the responded households were free from indebtedness before the incidence. Only 6.25 percent household respondents had small loans below Rs. 100,000. After the earthquake some people got the facilities of loan regarding the construction of new or old houses. Still 37.5 percent of the respondent

households had loan below Rs. 100,000. Seven households (26.56 percent) had loan from Rs. 100,000 to Rs. 500,000.

4.4.8 Households' Decision Making Status

Mostly, oldest male would be the head the household (*Thakuli* or *Thakali* in Nepal Bhasha) in Newar society, but, concerning the household chores, oldest female family member (*ThakuliorThakali*) would become the head. They have effective social and cultural roles in the community.

Table 4.8a: Household Heads of Respondents

S.No.	Head of Household	Number of Respondents	Percentage
1	Male	45	70.31
2	Female	19	29.69
	Total	64	100

Source: Field Survey, 2074

More than 70 per cent of respondent households (45 out of 64) were headed by men, only below 20 out of 64 of the household of respondents (29,69 percent) were headed by women who were within the ages of 36 to above 55 years.

Decision making is one of the important indicators that shows empowered mass in male dominant society like Nepal which is related to livelihood of the people. People who earn mostly become the decision maker of the household, in general. Being a patriarchal and patrimonial society, males make decisions in the household families. But, in some parts, female plays that role. Below, the table shows the main decision maker of sampled women's household.

Table 4.8b: Decision Making Status in the Households of Respondents

S.No.	Decision Maker	Number of Respondents	Percent
1	Male	24	37.50
2	Female	13	20.31
3	Both	27	42.19
	Total	64	100

Source: Field Survey, 2074

Regarding the decision maker in households, as shown in table given above, 24 households out of 64 were male decision makers; it means 37.50 percent households had male decision makers. Similarly, 20.31 percent of the responded households had female decision makers. Twenty seven households had both male and female decision maker out of 64 respondents' households that revealed highest (42.29) in percentage.

4.4.9 Change in Housing Structure

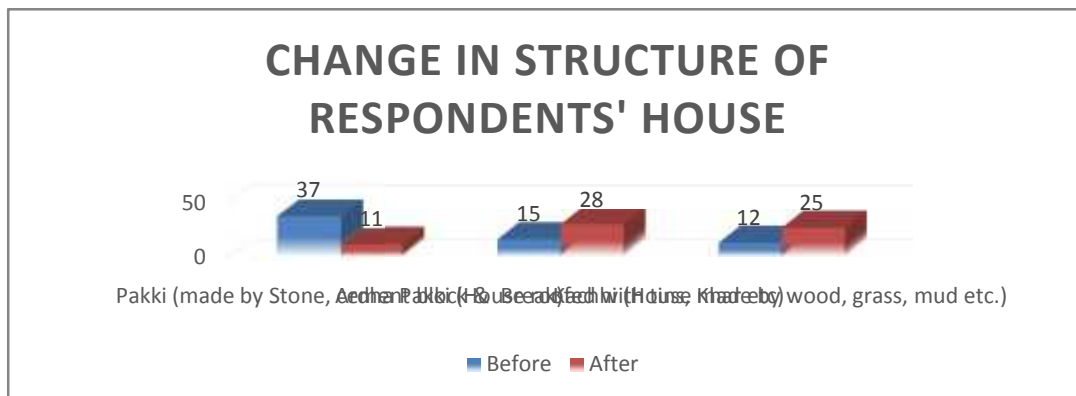
Change in Housing Structure is an important aspect of impact by earthquake. In Khokana, almost all houses built by the brick and mud collapsed into debris. Only some houses renovated after the last earth quake, newly built houses and cemented houses with concrete-rod pillars were left with some cracks and little damages. Many people had to take shelter in open fields in tent, tinned temporary houses or some in other neighbor/relatives' houses. Following table states the change in shelter after the earthquake.

Table 4.9: Change in housing Structure

S.No.	Types	Before	After	Change
1	Pakki (made by Stone, cement block & Break)	37	11	-40.63%
2	ArdhaPakki (House roofed with tins, Kharetc)	15	28	-20.32%
3	Kachhi (House made by wood, grass, mud etc.)	12	25	-20.31%

Source: Field Survey, 2074

Figure 3: Change in Structure of the Respondents' House



Source: Field Survey, 2074

Above table and figure shows that 37 households of respondent reside in Pakki houses changed into 11. Thus, Pakki houses were changed with decrease of 70.27 percent. Similarly,

23 ArdhaPakki houses are decreased to 16 with negative diminish of 10.94 percent. And Kachchi houses were increased by 37.5 percent, from 4 to 28 in number, more than the decrease of the former.

In enquiry to another question of loss of physical property and worth value of the houses, all respondent reported more than Nepalese Rupees of 50,000. Many of them stated that they fall down to earth from their heavenly residence, incurring loss much more than hundreds of thousand Rupees worth value.

4.4.10 Migration

Almost all people of Khokanamigrated temporarily from their residents to many other places near to their house due to earthquake. After around month of staying outside some people stayed back to their own house thinking that there would be no other big strokes of earthquake. Below in the table it has shown that after the infrastructure development in the community how is the trend of seasonal migration.

Table 4.10: Migration

S.No.	Migration to Temporary Houses	Respondents	Percent
1	Yes	23	35.94
2	No	41	64.06
	Total	64	100

Source: Field Survey, 2074

Above the table stated that 35.94 percent of respondents (23 in number) agreed that they had been migrated to some places. But more 41 household respondents (64.06 in percentage) did not migrate, they informed that even though they stayed outside for some period, they came back and stayed in the same house and did some renovations.

4.5Health Impact of Earthquake 2072

Lots of people died during and after the earth quake 2072. The death tolled 9 person even in a small city of Khokana. Many people injured during the incident. Some became permanently disabled. Among 64 respondent, only 1 respondents' family member died due to earthquake. Most of the respondent had health issues during and after the earthquake. However, no epidemic of cholera and other communicable diseases prevailed among the respondent households.

4.5.1 Physical and Mental Problem occurred by the Earthquake

In inquiry, only one respondent informed the death of a family member in the earthquake. But, many respondents had reported injured family members in their households. The following table shows the injured person with the degree of disability.

Table 4.11a: Distribution of the Respondents on Health Issues and Disabilities of Respondent Households

S.No.	Issues	Respondents	Percent
1	Mental problems	12	18.75
2	Health problem	18	28.13
3	Injury	16	25.00
4	Disability	10	15.63
5	None	8	12.50
	Total	64	100

Source: Field Survey, 2014

Above table stated that 12 out of 64 respondent (18.75 percent) reported having mental problems due to earthquake. Similarly, more than 28 percent had health problem. One fourth of the responded households became injured. The percentage of disables in responded households was 15.63. Only one eighth portion of the respondents reported that none of their family members faced any physical issue.

In the same way, the following table depicts the degree of problem/disability among the respondent households.

Table 4.11b: Distribution of the Respondents on Degree of Disabilities of Respondent Households

S.No.	Degree	Respondents	Percent
1	Normal	1	10.00
2	Mild	8	80.00
3	Severe	1	10.00
4	Life long	0	0
	Total	10	100

Source: Field Survey, 2014

Among the 10 disabled, one person had severe the degree of disability and 8 had mild type of disability. One was normally disabled and no one found lifelong disabled.

4.5.2 Food and Nutrition during the Earthquake

During the earthquake lot of people became panic. Some people did not even felt hunger due to sever natural epic. But, as lots of houses collapsed with inaccessibility in food stuff, people did not get food and water for consumption. Many rescue teams from the centre and nearer cities helped the victims supplying food and water. But, the respondents reported that most of them did not get enough food and nutrition during the earthquake. Table below, explains the condition of food and nutrition during the phenomena.

Table 4.12a: Distribution of the Respondents on Food and Nutrition Supply during the Earthquake

S.No.	Food/Nutrition	Respondents	Percent
1	Yes	35	54.69
2	No	29	45.31
	Total	64	100

Source: Field Survey, 2074

In the question whether they get proper nutrition during earthquake, 35 out of 64 responded in positive way, that means 54.69 percent of the respondents got proper nutrition during the earthquake, the remaining portion did not get adequate nutrition.

Inquiring of getting any disease due to insufficient food and proper water, many respondents stated they got many diseases like, cold and cough, fever, diarrhea, anxieties etc.

Table 4.12b: Distribution of the Respondents on Diseases prevailed during the Earthquake

S.No.	Diseased	Respondents	Common diseases
1	Yes	19	Fever, Diarrhea & Anxiety
2	No	10	-
	Total	29	

Source: Field Survey, 2074

Among the 29 respondents who reported to get inadequate food and nutrition, many of them got said to get common diseases, such as, cold and cough, fever, diarrhea etc.

4.6 Educational Impact of earthquake 2072

There was a disturbance on education of the school going students during the earthquake. All the educational institutions were closed for few months. But after a few months, the students went to schools regularly. In Khokana, only one school was partially damaged so there is not much affect in educational status after earthquake.

4.6.1 Distribution of Respondents by Education Status

Education plays a key role in the development of an individual. It is one of the major degrees to measure the social status of any community. Moreover, education for women is so important it helps them to improve their status in the community. Generally, the level of education is the indicator of the social status of women. The education status of the sampled households of the study area has been presented below in Table:

Table 4.13a: Distribution of the Respondents on Education Status

S.No.	Education	No. of Respondents	Percent
1	Illiterate & Non formal literacy	19	29.69
2	Primary (Class I to Class V)	20	31.25
3	Secondary (Class VI to Class X)	14	21.88
4	Higher Secondary (Class XI to Class XII)	7	10.94
5	Bachelor and above	4	06.25
	Total	64	100

Source: Field Survey, 2074

Above table shows that most of the respondents were illiterate or lowest in education. The number of illiterate and non-formally literate was 19 (29.69 percent) and those who had gone to primary school (Class I to Class V) were 20 in number (31.25 percent). Respondents who got secondary (Class VI to Class X) and higher secondary education (Class XI to Class XII) comprise 14 and 7 in number, both made 21.88 and 10.94 percent respectively (32.82 percent in combination). Only 4 respondents out of 64 (6.25 percent) got Bachelor and above education.

4.6.2 Regularity/Dropout of Children of the Respondent Households in Education

Earthquake made some of the villagers dead, some injured and some physically or mentally disabled. Many of the school going children became unable to study regularly while some had to dropout from their studies. Table 18 and Table 19 depict the irregularity of school going children.

Table 4.14a: Regularity/Dropout in Education of Respondents' Household Children

S.No.	Condition of Children	No. of Responded Households	Percent
1	No school going	4	06.25
2	Regular	55	85.94
3	Drop outs	5	07.81
	Total	64	100

Source: Field Survey, 2074

The above table shows that 4 (6.25 percent) household did not have the school going children. Their children might have either left schooling or still not in age to go to school. But, most of the household respondents 55 (86.94 percent) reported that their children were regular in education, not affected by the earthquake. School dropouts were found to be 5 in number, that is, 7.81 in percentage. They dropped out the school because of the earthquake.

It was known that even though schools were closed for a long time, their children went regularly as soon as they were opened. Also, in answer to another question, all respondents informed that none of their children changed their level of education because of the earthquake. Similarly, only one household respondent reported that their child changed the government school to private one; and the cause of change was earthquake.

Table 4.14b: Dropout in Education of Respondents' Household Children

S.No.	Dropout	No. of Responded Households	Percent	Cause
1	Boys	4	80.00	EQ
2	Girls	1	20.00	-
	Total	5	100	

Source: Field Survey, 2074

Above table shows that among the five children dropped out from school going, 4 were boys and only one girl. Thus, 80 percent of the dropped out were boys while 20 percent girl. The boys dropped out the school because after earthquake they did not have time as they were engaged in earning for living. Similarly, the girl dropped out as she has to support the family in household chores.

However, there was no change in the education levels of the students after the incident; it was revealed that 5 children of the respondents had dropped out their studies due to the earthquake (by Table 7 and Table 8 above). Some of them had to see works for living after earthquake. The study stated of the households' economic conditions after the great disaster in Khokana.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study was focused on “the socio-economic impact of earthquake 2072 in women of Khokana, Lalitpur.” The specific objectives of the study are: to examine the present general scenario of the study area after earthquake-2072, to compare the socio-economic status of women before and after earthquake, to analyze the health problems after earthquake, to analyze the educational problems after earthquake.

The study attempts to explore and investigate the socio-economic and decisional power of women in the society, so, it is an exploratory as well as descriptive type of study. It is mainly based on primary information, household survey questionnaire was filled from 64 respondents, key informant interviews were carried out with stakeholders with the help of structure questionnaires and observation of the field area was also carried out. Other related information was taken from the different person who is working in infrastructure development in the study area. The collected data were analyzed systematically and scientifically by using different statistical tools. The data have been transcribed into excel texts to ease the data analysis.

Khokana is a beautiful Newar village and is regarded as a living cultural museum reflective of medieval times. But, the earthquake of April 25, 2015 took its charming life away. The old and traditional houses are now rubble. Most of the remaining houses are supported by bamboo and wooden logs mostly from outside.

Out of 1,056 households 837 were completely or partially damaged by the earthquake 2072. Similarly, 4 major temples, 1 school and 3 other sort of buildings like Pati had been damaged in the study area.

The 64 married women selected as informants were categorized in four groups; between 25 years of age to 60 above. Half (50 percent) of the total respondents were found to be fall under the age group of 25 to 35 years.

Thirty four respondents out of 64 were from nuclear families type. That mean 55.13 percent respondents were living in joint families. Thirty of them (46.87 percent) were living in nuclear family system.

None of the respondents were involved in government sector before the earthquake, but after the earthquake, one woman became selected in the local government authority as the ward member. Before the earthquake there 32 respondents were not involved in any institution but after the earthquake only 26 members have not been involved that means 6 members have been involved in different institutions especially in health institution and socio-cultural like mother groups and cooperative groups.

The majority of the household depend on agricultural income, 65.62 % of the respondent households has main income source is farming, whereas 21.87% were depend upon wage labour.

Status of income and expenditure of respondents shows that before the earthquake there was no deficit but after the earthquake 40.62% had deficit.

After the earthquake most of the respondents' income had been changed. 31.25% respondents' income had been decreased by below 10,000 whereas 59.38% had no change in income.

Before the earthquake, 93.75% had no loans but after the earthquake 65.63% had taken loans more or less. 26.56% had taken loans 100,000-500,000 rupees.

More than 70% of respondents' household were headed by men and 29.39% were headed by women. Regarding decision making 37.50% were male decision maker and 42.19% were decided by both male and female.

In housing structure before there were 37 Pakki houses which was decreased to 11 after earthquake and Kachhi houses were increased by 20.31% after earthquake.

23 among 64 respondents were migrated in temporary houses after the earthquake.

Almost all respondents have health issues during earthquake. 18.75% had mental problems and 15.63% had been disabled, out of them 10% had severe and normal degree of disabilities.

Food and nutrition supply was also affected during earthquake. 45.31% had no enough food and nutrition during the earthquake, among them 19 respondent had fever, diarrhea and anxiety.

The education status of women is 29.69% of women are illiterate and only 6.25% of women were studied more than bachelor level.

During the earthquake, most of the schools were closed for more than months but after few months there is regularity in the education. Hence, 85.94% of the students were regular in schools whereas 7.81% of the students dropout due to earthquake, among them 80% were boys.

5.2 Conclusions

In a conclusion, during the earthquake lot of people became panic. Some people did not even felt hunger due to sever natural epic. There was a great impact of socio-economic status of women in Khokana. But in involvement in various sector after the earthquake, they had involved in socio-cultural groups like mothers' group and other local health institution and one of the respondent was involved in government sector as ward member. Lots of people died during and after the earth quake 2072. Most of the respondent had health issues during and after the earthquake. However, no epidemic of cholera and other communicable diseases prevailed among the respondent households. There was a disturbance on education of the school going students during the earthquake. All the educational institution were closed for few months. But after a few months, the students went to schools regularly. In Khokana, only one school was partially damaged so there is not much affect in educational status after earthquake.

5.3 Recommendations

It can be listed a few relevant recommendations based upon the conclusion and findings that have been derived. The purpose here is to make significant steps towards raising the decision making power of women within the household and of course in social sectors after the earthquake.

Recommendations to Government policy maker

- 1) From study it was found that there is lack of employment opportunity to respondents. Hence employment opportunities should be made available for the educated girls and women, which would encourage their economic participation and hence elevate her status within the household.
- 2) There is low literacy rate in study area. The overall literacy rate should be increased with special emphasis upon promoting higher literacy rate among the women. This could be achieved by providing favorable environment to study for girls in school.

Recommendations to NGOs/INGOs

- 1) Though various programmes have been run by NGOs/INGOs and Human Rights Organization to uplift the status of women in every field in national level, these programmes shouldn't only be confined within cities and headquarters but it should be practiced from the grass root level. Then only the aim to improve the status of women and to bring equality between male and female can be achieved.
- 2) The concept of gender equity and the attitude towards women need to be modified in our patriarchal society to boost up the women's status in the family or society.
- 3) As all the respondents were very afraid and had mental problems during the earthquake. There should be psychological awareness to all the victims to reduce the mental health problems.

REFERENCE

- Acharya, M. (1987). *The Status of Women in Nepal*. Vol. II, Part 4. Kathmandu: CEDA: pp 135-142.
- Bajracharya, N. (1994). *Educational Condition of Khokana VDC (Village Profile)*, submitted to National Development Service, Tribhuvan University.
- Bennet, L. (1981). *The Parbatiya of Bakundol, The Status of Women in Nepal*, Vol II, Part 7, Kathmandu, CEDA.
- CBS (2012). *Population Monograph of Nepal*. Kathmandu: Nepal Government
- Chew, L. and Ramdas, K. (2005). *The impact of natural disaster on women*, The global fund for women.
- Devkota, S. (2018). *Education and Women in Nepal*. The Rising Nepal, 22 March 2018.
- GON (2011). *Nepal disaster report ..policies practice and lessons* , Kathmandu : Ministry of Home affairs Government of Nepal.
- Kanur,S (1993). *A Case Study Women in Rural Development* Delhi : Mittal.
- O'Neil. T. *et el*, (2015). *The Power to Decide: Women, Decision-making and Gender Equality*. London, Overseas Development Institute,. www.odi.org
- Project Report, (2016). *Project for Investigation of Damage Situation of Cultural Heritage in Nepal*, National Research Institute for Cultural Properties, Tokyo
- Rana, B. (1990). *90 Salko ,Mahabhuampa*, Kathmandu : SajhaPustakBhandar
- R-<http://www.manang.com/khokana/2073-02-05/20:00>
- Shakya, Pl (1994). *Situation of Women in Khokana VDC (Village Profile) submitted to National Development Service*, Tribhuvan University.
- UN (2001). *Prevent Unwanted Pregnancy and Safe Motherhood*. New York: WHO
- UNDP (1995). *Nepal Human Development Report*. New York: Oxford University Press.

UNICEF (2008). *Children and Women of Nepal: A Situation Analysis*. Kathmandu: UNICEF

WHO (1998). *Prevent Unwanted Pregnancy and Safe Motherhood*. Kathmandu: UNICEF.

<http://hotc.org.np/earthquake-relief-team-at-khokana-village/2073-02-05/19:00>

http://www.tobunken.go.jp/japanese/publication/pdf/Nepal_NRICPT_2016_ENG_s.pdf.

ANNEX – I

SOCIO-ECONOMIC IMPACT OF EARTHQUAKE-2072 IN WOMEN: A CASE STUDY OF KHOKANA, LALITPUR HOUSEHOLD QUESTIONNAIRES SURVEY

A) Personal Information

1. Name:

2. Age:

- a. 25-35 years b. 36-45 years c. 45-55 years
d. 55+ years

3. Sex: M F

4. Marital Status: Married Unmarried Widow Single

5. Family System:

Joint Nuclear Number of family members: Male+ Female Total
.....

B) Socio-economic structure questionnaire

1. Who is the head of your household? Male Female

2. Who makes the decision on your household? Male Female Both together

3. Occupation and Job structure

Occupation	Before	After
Government		
Private		
Own business		
Farming only		
Wage labour & Jobless		

3.A Mostly in which sector dose your female member of family is involved?

Income	Before	After
Farming		
Employment		
Remittance		
Wages Labour		
Business		
Household chores		
Other		

4. What is the main source of income in your households?

Income	Before	After
Farming		
Employment		
Remittance		
Wages Labour		
Business		
Other		

4.A Change in income before and after earthquake

Income / month	Before	After
No change		
10,000 and below		
10,001-20,000		
20001- 30,000		
30,000 above		

5. Involvement in institution

Institution	Before	after
Government		
Private		
Health (Local)		
Socio-Cultural		
None		

6. Change in Housing Structure

Types	Before	After
Pakki (made by Stone, cement block and Break)		
ArdhaPakki (House roofed with tins, Kharetc)		
Kachhi (House made by wood, grass, mud etc.)		
Worth Value		

7. Do you have any loan?

Indebtness/Loan	before	after
Below 5000		
5000-10,000		
10,000-50,000		
50,000 above		

9. Did you migrate?

No Yes If yes, what is the reason of migration?.....

C. Health impact questionnaire

1. Is there any family member lost due to earthquake?

Yes No

2. Health issues

Issue	Before	After
Health problems		
Mental problem		
Disability		
Injury		
None		

2.1 degree of problem/disability

- Normal
- Mild
- Severe
- Life long

3. Did you get the proper nutrition during earthquake?

- Yes No

3.1 If not did you get any disease due to that?

No Yes If yes, what kind of disease?

D) Educational structure questionnaire

1. No. of school drop outs

Dropout	Before	After
Boys		
Girls		

2. A Causes of drops

- Earthquake
- Other reasons

3.A Did they change the school due to earthquake?

- Yes No

ANNEX – II

KEY INFORMANTS INTERVIEW GUIDELINE

A) Personal Information

1. Name:

2. Age :

a. 15-30 years

b. 30-45 years

c. 45-60 years

d. 60+ years

3. Institution Involved:

4. Position/Designation:

B) Interview Questions

1. How many buildings have been destroyed by earthquake 2072 in Khokana?

a. Houses ...

b. Temples ...

c. Schools ...

d. Other buildings ...

2. How many people died during earthquake?

3. How many people were disabled?

ANNEXES III

Pictures of field survey



Figure: Townscape of Khokana Village



Terrace rice field in the periphery of Khokana



Damage situation of Khokana after earthquake