

**GANDER-RESPONSIVE FARMING PRACTICES OF SORU RURAL  
MUNICIPALITY IN MUGU, KARNALI- NEPAL**

A Thesis

Submitted to

Faculty of Humanities and Social Sciences,  
Central Department of Rural Development, Tribhuvan University

In Partial Fulfillment of Requirement for the  
Degree of Masters of Arts (MA)

In  
Rural Development

By

**LAXMAN ROKAYA**

Central Department of Rural Development,  
Tribhuvan University

Kirtipur Kathmandu

Exam Roll No.: 281169

TU, Registration No.: 9-2-672-20-2009

**August 2022**

## DECLARATION

I hereby declare that to the best of my knowledge this thesis entitled **GANDER-RESPONSIVE FARMING PRACTICES OF SORU RURAL MUNICIPALITY IN MUGU DISTRICT** is entirely my original work prepared under the guidance and supervision of my supervisor; no part of it was earlier submitted, no one was submit any university, college and educational institutions in the earlier for any purpose. I have made due acknowledges to all ideas and information borrowed from different sources in the course of writing this thesis. The subject matter presented in this thesis report is the result/finding of my own field work based. I assure that no part of the content of this thesis has been published in any from before.

---

Laxman Rokaya

Date: 2077/11/02

2021, Feb-14

## **LATTER OF RECOMMENDATION**

This is to certify that Mr. Laxman Rokaya has completed the dissertation entitled by **GANDER-RESPONSIVE FARMING PRACTICES OF SORU RURAL MUNICIPALITY IN MUGU DISTRICT** has been prepared under my supervision and guidance as a partial fulfillment of the requirements for the Degree of Master's of Arts (MA) in Rural Development Studies. To the best of my knowledge, it is his original work; therefore, this is recommended for the final evolution and approval.

---

Assoc. Prof. Dr. Ratna Mani Nepal  
Central Department of Rural Development  
Kirtipur, Kathmandu  
Thesis Supervisor

Date: 2077/11/04  
2021, Feb-16

## **APPROVAL SHEET**

We certify that this thesis entitled **GANDER-RESPONSIVE FARMING PRACTICES OF SORU RURAL MUNICIPALITY IN MUGU DISTRICT** Submitted by Mr. Laxamn Rokaya has been examined and found satisfactory in quality and accepted in partial fulfillment of the requirements for the Degree of Masters of Arts (MA) in Rural Development Studies.

### **Evaluation Committee**

---

Associate Prof. Bishnu Bahadur Khatri  
Head of the Department

---

Assoc. Prof. Dr. Ratna Mani Nepal  
Thesis Supervisor

---

Dr. Rajan Binayek Pasa  
External Examiner

Date: 2077/11/09  
2021, Feb-21

## ACKNOWLEDGEMENTS

This thesis is a product of many cooperative and mutual minds. First of all, I would like to express my gratitude to my supervisor Associate Professor Dr. Ratna Mani Nepal for his kindly cooperation, valuable suggestion, continuous guidance, constructive comments and encouragement in prepared this thesis from starting to end it successfully.

I would like to acknowledge Central Department of Rural Development for giving me such a valuable opportunity to use the theoretical knowledge in the practical field. I would like to thank my External thesis supervisor Dr. Rajan Binayek Pasa for not only giving me suggestions, advice, and guidance in completing this thesis, but also he always motivating to me throughout my university study journey. Similarly thankful to all the CDRD family for helping me to structure this thesis in the present form.

Besides, I would like to give, my heartfelt thanks to Mrs. Maya Khadka (Rokaya) who not only helped to questionnaire/data collection in the field works; but also encourage me with everything possible to pursue higher study and to materialize my cherished dream. Similarly, I would like to thanks all the respondents and participants for providing me valuable time and moral supports. I must appreciate the kind help of all my colleagues during the preparation of this thesis. Finally, special thanks to Miss Aditi for typing and formatting thisreport in this form.

Laxman Rokaya

## ABSTRACT

Gender Responsive Farming Practices helps to treat equitable rural agriculture based economic development through positive action to both farmers including role, participation, decision, access and control over the productive agriculture resources and their benefits. This study therefore tried to access and analyze gender responsive farming practices in Soru Rural Municipality of Mugu District. Methodologically the study has design by descriptive research design and also offered explanatory-survey design with applied gender research norms and values in the study. The whole study has carried out on the basis of primary as well as secondary source of data. The study was conducted in Soru Rural Municipality, 8- Mugu District, has been select 125 HH of 52 male and 73 females sample HH respondents from total 178 HH of the different 6 village including; Rara-Asidhara, Kachhe, Pallabada, Ruma, Gylaha, and Tarapani using systematic sampling technique were chose convenience/purposively. Basically structural questionnaire, observation, FDG and checked list has applied as data collection tools and technique in the study of field works. And the Scientific method of data analysis has also used for reliability and validity test through SPSS, Excel and TMR Method.

The study has been found 76% female and 23.2% male respondents are engaged in agriculture occupation of total 76.6% farmers. There is more viability of organic farming and agro tourism. Paddy, Wheat, Millet, Maize, Barley, Kauno, Chino, Phapar Simi, and Mas are major crops for harvesting, and above 60% farmers practicing vegetable and Himali fruits i.e. apple and chestnut. Less than 4% female have own from total 84.8% registered land. 2 % have both registered land. Above 91 % household has applied traditional agriculture systems. 51% product market coverage by neighbors community, 38% by own village, 9% coverage by district and only 2% product market covered by provincial market. Above 51% farmers are applying home get and 48.8% has applying retailer way of marketing. Above 40% people are still illiterate. 41.1% are out of accessibility of basic services. Bottom 20% male has spend 3.84% and but only bottom 2% female was spend 2.4% time, similarly 100% female was spend 96.71% and male has spend 35% time in agriculture on daily basis. Similarly, above 9.9% agriculture income of male farmers is higher than female in the study areas.

Finally, gender inequality in agriculture is most of the challenging issues in study areas. When the women socio-economic empowerment status is very poor, due to the cause of works division of labor based on quality of works system, as well as poor access to factors of production and its benefits, wage rate inequality, women workload, lack of basic service accessibility, and less access to agro financing are the challenging issues/problems for GRFP. Therefore, it is necessary to dissemination of both land registration, women lead gender friendly civil and cooperative organization should formulate on agriculture and rural development policy, strategies and plan to achieve the goals of GRAD for economic growth.

## TABLE OF CONTENTS

DECLARATION .....	ii
LATTER OF RECOMMENDATION.....	iii
APPROVAL SHEET .....	iv
ACKNOWLEDGEMENTS.....	v
ABSTRACT.....	vi
LIST OF TABLE .....	x
LIST OF FIGURE.....	xi
ABBREVIATION /ACRONYMS.....	xii
CHAPTER I : INTRODUCTION.....	1-20
1.1 Background of the Study.....	1
1.2 Rational of the Study.....	4
1.3 Problems Statement.....	5
1.4 Objectives of the Study. ....	7
1.5 Significance of the Study. ....	7
1.6 Limitation of the Study .....	7
1.7 Organization of the Study .....	8
CHAPTER II : LITERATURE REVIEW .....	9-59
2.1 Conceptual Review .....	9
2.1.1 Historically Context of Agriculture Development .....	9
2.1.2 Agriculture Development and Economic Growth.....	13
2.1.3 Top Five Agriculture Producers Counties .....	15
2.1.4 Gender Responsive Agriculture in Global Context.....	16
2.1.5 Gender Responsive Agriculture in Nepalese Context .....	17
2.2 Theoretical Review .....	19
2.2.1 Theory of Agriculture Development and Gender.....	19
2.2.2 Gender Inequality Approach .....	21
2.2.3 Effect to Address Gender Issues )WID, WAD & GAD(.....	23
2.2.4 Gender Analysis Framework and Agriculture Development .....	24
2.3 Empirical Review .....	27
2.3.1 Agriculture Development from Gender Prospective. ....	27
2.3.2 Women’s Decision-making, Voice and Political Representation .....	33
2.4 Policy Review .....	36
2.4.1 Gender in Agriculture and Rural Development Policy and Strategy ....	38
2.4.2.Gender Concerns in National Agriculture Plan and Program .....	41

2.4.3 International Commitments and Legal Provision for Gender Equality Promotion and Agriculture Development.....	44
2.5 Knowledge Gap.....	46
2.6 Conceptual Framework of the study. ....	48
CHAPTER III : RESEARCH METHODOLOGY .....	50-66
3.1 Research Design.....	50
3.2 Geographical Description.....	51
3.3 Selection of the Study Area.....	51
3.4 Nature and Source of Data .....	52
3.4.1 Primary .....	52
3.4.2 Secondary .....	52
3.5 Sampling Procedure .....	52
3.5.1 Defining Population.....	53
3.5.2 Sample Size .....	53
3.5.3 Determining Sampling Tools and Technique .....	53
3.6 Data Collection, Tools and Techniques .....	54
3.6.1 Questionnaire Survey. ....	54
3.6.2 Observation.....	54
3.6.3 Key Informant Interview .....	54
3.6.4 Focus Group Discussion.....	55
3.6.5 Check List.....	55
3.7 Data Analysis and Interpretation.....	55
3.8 Ethical Consideration .....	55
CHAPTER IV : DATA ANALYSIS AND INTERPRETATION .....	56-93
4.1 General Characteristics of the Respondents.....	56
4.1.1 Demography Characteristics.....	56
4.1.2 Education .....	58
4.1.3 Food Sufficiency Status:.....	59
4.1.4 Occupation /Livelihood Options .....	61
4.1.5 Land Ownership and Barren Land Ratio of The Respondents.....	62
4.2 Analysis of the GRFP Related variables (Objective 1).....	62
4.2.1 Major Cropping Practices .....	62
4.2.2 Types of Land Holding.....	63
4.2.3 Agro-input for GRFP.....	64
4.2.4 Agro-marketing Status.....	69



4.2.5 Gender Role in Agriculture Development .....	71
4.3 Problems and Prospect of GRFP (Objective 2).....	73
4.3.1 Access and control over the resources and benefits. ....	73
4.3.2 Wage Rate in Agriculture: .....	75
4.3.3 Decision Process in GRFP:.....	76
4.4.4 Workload of Women in Agriculture.....	76
4.3.5 Lack of Basic Service Accessibility .....	77
4.3.6 Problems of Agro-financing .....	79
4.4 Impact of GRFP in Agriculture Development (Objective 3).....	80
4.4.1 Economic Empowerment. ....	80
4.4.2 Employment Generation.....	81
4.4.3 Access to Education.....	82
CHAPTER V : SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION .....	83-101
5.1 Summary .....	83
5.2 Discussion of Finding.....	86
5.3 Conclusions .....	88
5.4 Recommendations .....	89
References:.....	93-107
APPENDICE.....	98-116
Appendix -I :Questionnaire .....	98
Appendix II :Observation Guidelines .....	101
Appendix IV :FDG Guidelines .....	103
Appendix IV :Glimpses of Field work.....	105

## LIST OF TABLE

<i>Table 2. 1: Top five Agriculture Producers Countries.....</i>	<i>15</i>
<i>Table 4 .1 :Households Population Composition of Soru R/M, Word no .8 .....</i>	<i>56</i>
<i>Table 4 .2 :Sample Population Composition of the Study .....</i>	<i>57</i>
<i>Table 4 .3 :Distribution of Sample HH by Weed Control Practice. ....</i>	<i>66</i>
<i>Table 4 .4 :Different Technologies for Harvesting Crop.....</i>	<i>67</i>
<i>Table 4 .5 :Different Technologies Using for Caring the Crops/Vegetables. ....</i>	<i>67</i>
<i>Table 4 .6 :Distribution of Agro-Marketing Channel. ....</i>	<i>70</i>
<i>Table 4 .7 :Distribution of Sample HH by Gender Role in Agriculture. ....</i>	<i>71</i>
<i>Table 4 .8: Status of Access and Control of the Resources and Benefits.....</i>	<i>74</i>
<i>Table 4 .9 : Sample Household by Decision Making Process of GRFP.....</i>	<i>76</i>
<i>Table 4 .10 :Accessible Service Distribution by Sample Household. ....</i>	<i>78</i>
<i>Table 4 .11 :Distribution of Household by Agro-financing Services.....</i>	<i>79</i>
<i>Table 4 .12 : Employment Opportunity in Farm and Off Farm Activities.....</i>	<i>81</i>

## LIST OF FIGURE

<i>Figure 2 .1</i> :Stages of Agriculture Development or Revolution. ....	10
<i>Figure 2 .2</i> :Framework of the study. ....	49
<i>Figure 3 .1</i> :Geographical Map of Study Area.....	51
<i>Figure 4 .1</i> :Age and Sex Composition of Study Population.....	58
<i>Figure 4 .2</i> :Status of Literacy .....	59
<i>Figure 4 .3</i> :Distribution of Sample Household by Food Sufficiency.....	59
<i>Figure 4 .4</i> :Supplementary Sources of Food defect by family household. ....	60
<i>Figure 4 .5</i> :Occupational Distribution by Village and Household.....	61
<i>Figure 4 .6</i> :Distribution of Sample HH by Land Possession. ....	62
<i>Figure 4 .7</i> : Distribution of Number of Households by Types of Crop. ....	63
<i>Figure 4 .8</i> :Distribution of Sample HH by Land Types. ....	64
<i>Figure 4 .9</i> : Distribution of Use Improve Seed Management. ....	65
<i>Figure 4 .10</i> :Distribution of Sample Household by Applying Technology. ....	66
<i>Figure 4 .11</i> :Distribution of Soil Fertility Preservation Practices.....	69
<i>Figure 4 .12</i> :Distribution of the Surplus Product by Covering Market.....	70
<i>Figure 4 .13</i> :Distribution of Sample Household by Wage Rate in Agriculture ...	75
<i>Figure 4 .14</i> :Agriculture Workload Inequalities Distribution by Sex.....	77
<i>Figure 4 .15</i> : Agro-Income Inequality of Sample Household by Sex. ....	81
<i>Figure 4 .16</i> :Household Distribution of Gender in Education. ....	82

## ABBREVIATION/ ACRONYMS

ADB	: Agriculture Development Bank
ADS	: Agriculture Development Strategy
APROSE	: Community Based Organization
AMPP	: Agriculture Mechanization Promotion Policy
ASDP	: Agriculture Sector Development Program
BPFA	: Beijing Declaration and Platform for Action For Equity, Development and Peace
CBS	: Central Burro of Statistics
CBOs	: Community Based Organizations.
CEDAW	: Convention on the Elimination of All Forms of Discrimination Against Women
GAD	: Gender and Development
GAM	: Gender Analysis Framework
GESI	: Gender Equality and Social Inclusion
GRB	: Gender Responsive Budget
GRFP	: Gender Responsive Farming Practices
GoN	: Government of Nepal
GMS	: Gender Maistreaming Strategy
ICCPR	: International Covenant on Civil and Political Rights
ICESCR	: International Covenant on Economic, Social and Cultural Rights
ICPD	: International Conference on Population and Development
IFAD	: International Fund for Agricultural Development
ILO	: International Labor Organization.
MoAD	: Ministry of Agriculture Development.
MoAC	: Ministry of Agriculture and Cooperative
MDGs	: Millennium Development Goals
MoWCSW	: Ministry of Women, Children and Social Welfare
MoLACM	: Ministry of Land, Agriculture and Cooperatives Management
NHRAP	: Nepal Human Right Action Plan
NPC	: National Planning Commission
NWC	: Nepal Women Commission
NGOs	: Non-governmental organization
TMR	: Triangulation Method of Data Analysis
RD	: Rural Development
R/M	: Rural Municipality
SDGs	: Sustainable Development Goals
UDCs	: Under Development Countries
UNHR	: United Nations Human Rights Council
WB	: World Bank
WAD	: Women and Development
WID	: Women in Development

# **CHAPTER I**

## **INTRODUCTION**

### **1.1. Background of the Study**

Gender responsive development is a process that entails maintaining a gender perspective at various stages of development like program/policy formulation, assessment of needs of target groups, review of extant policies and guidelines, allocation of resources, implementation of programs, impact assessment, re-prioritization of resources, and so on. Gender responsive development (GRD) is the culmination of this all process (UNIFEM, 2001). Development respect gender norms, roles, relation and inequalities. On the other hand it takes views of inclusive development with the principle of empowerment, equality, inclusion, welfare, equal participation, and power dynamic. It puts greater emphasis on women as a disadvantage group to measures for promoting gender equality and women empowerment, foster women inclusion and provides equal opportunities for women and men to derive social and economic benefits.

Agriculture is a fundamental driver of economic growth and poverty reduction for many developing countries (DCs). And also most of the people have the source of income or livelihood is agriculture occupation in UDCs. The sectors has been providing livelihood for more than 40 percentage of global population and creating income and job option to the poor rural household (United Nation [UN], 2015), However, globally 733.48 million people are still living with extreme poverty and vast majority of the world's 12.9 percent hunger or undernourished people are living in DCs (United Nation [UN], 2015). Women make essential contributions to agriculture in developing countries, but past efforts revitalizing the agriculture sector have failed in part because they overlooked the role of women and the negative effects of gender inequalities on productivity. According to FAO (2011) Women comprise, on average, 43 percent of the agricultural labor force in developing countries, ranging from 20 percent in Latin America to 50 percent in Eastern Asia and sub-Saharan Africa (FAO, 2011), which the report seems to very gender gap in the factors of production, and also they have less access than men to productive resources and opportunities (FAO, 2011).

According to Human Development Report, 2019 Nepal contain 148th position and 0.579 HDI value and GNI Per capita income is 2749 PPP\$ (UNDP, 2019) . The agricultural sector in Nepal was responsible for approximately one third of the country's gross domestic product (GDP) in 2016 (MoF, 2019) and 65.6 percent of the total population depends on agriculture for their livelihood (MoF, 2019); Therefore the agriculture is the largest sector and the pillar of Nepalese economy. Agriculture contributes of 40.19 percent its GDP on economy (MoF, 2019); out of the total land about 20 percent cultivated (CBS, 2014). Half of the agricultural GDP comes from crop production, followed by livestock (25%), vegetable production (10%), forest products (8%), and other products (7%). Production of cash crops (especially maize, barley, sugarcane and vegetables) occurs, especially in the Terai region. Agriculture is the main source of livelihoods in this region, where 76.6% of the female and 54.5% of the male labor force were employed from total 64.0 percent in the sector (FAO, 2019; CBS, 2014). Mountain region covers about 7 percent of agricultural land, Hill region covers 40 and Terai region 53 percent of agricultural land (CBS, 2014). More than 82.9 percent of Nepalese population lives in rural area of Nepal and 62.2 percent male and 82.3 percent female proportion of total 71.6 percent people are primarily involved on agriculture occupation with the 12.3 percent per hector physical density of arable land in 2011. (CBS, 2012).

Mugu district is naturally prosperous point of development in Karnali , that covered 3535 Km<sup>2</sup> of the Karnali Karnali Zone in the Mid-Western Development Region (NPC & CBS, 2019). Mugu district administratively divided in to 9 Ilak's, and 24 VDCs and also new federal republic government has reform this structure comprise the one (1) Municipality three (3) rural municipality (R/M) and a single electoral constituency with its District Headquarter (DHQ) in the town of Shreenagar Gamgadhi. It is situated between 22<sup>o</sup> 46' to 29<sup>o</sup> 56' north latitude and 81<sup>o</sup> 4' to 82<sup>o</sup> 49' east longitude, along with ecological division of Hill, Mountain and Mountain valley. (NPC & CBS, 2019).

Agriculture is the main occupation of Mugali people. Additionally, they are depend on herbal medicine collection, livestock and agri-business. Directly, 94.99 percent female and 78.37 percent male actively engaged on agriculture labor market from total 87.04 percent population in this district. Only total 18421

hector land has cultivated from 19340 hector arable land. Similarly, 1044 hector agriculture land is irrigated, 844 hector lands depend on seasonal rain water harvesting system and 850 hector lands is lack off irrigation facilities. About 4 percent ratio of arable land of agriculture is decreasing in 2011 (94.13%) from 97.1 percent in 2001 but also increasing the proportion of permanent crop cultivation land from 0.41 to 1.99 percent in 2011 (NPC & CBS, 2019) due to the cause and effect of migration (FAO, 2019) and lack of gender friendly agriculture technology. Majority of the economically active youth discourage into farming activities because of more attraction on foreign employment than the substance based family farming of this village. As a result the women workloads were increasing in farm or non-farm activities. As well as, they forcefully engaged in substances based family farming system with insufficient farm production.

Local people are perceived various discriminatory practices such as gender, cast and class based. Gender-based discrimination is very widespread in Mugu. In over 90% of households in the Mid-Western Mountains, women or girls are responsible for collecting drinking water, and 30% of these women or girls have to walk more than 30 minutes daily to do so. Furthermore, 60% of women (ages 15-49) in the region are compelled to stay in an animal shed during menstruation period (UNFCO, 2013). Similarly, child marriage, domestic's violence, social discrimination, polygamy marriage, abuse of alcohol and other subordinate against women and child. As a result, the Mugalie's women are prevailing on the conservative paternalist system including participation, gender roles are assigned based on norms, or standards, created by society, work load, less prior and opportunity for empowerment, less access to and control over the productive resource, inequality of wage labor, land ownership, livestock, gender division of labor, education, extension and financial services, technology advancement, and employment opportunit. In this regard a study find 95 percent of households in Mugu, women own neither the house, nor any land, though only 8 percent households are headed by women. The female farmers can't enjoy to the share of farm production and productivity with inclusive; which the situation imposes costs on the agriculture sector, the broader economy and society as well as on women themselves (UNFCO, 2013).

## **1.2. Rational of the Study**

Lots of studies have been conducted among the field of gender and agriculture sector in humanities and social science, basically various study has been concerning with the issues of GRFP in the study areas. But there is not found research based literature about GRFP in this locality, because most of the research efforts were limited on urban areas, so that gender responsive farming practices (GRFP) relates knowledge, skills, and technology intervention may not be exploring to gender equality in agriculture.

Various earlier researcher highlighted to applied modern technology, government policy, and basic infrastructure related to agriculture development is major components of GRFP, but in the study areas various problems related to GRFP were being opposing to achieve the goals of GRFP. Furthermore, the study has been conducted among the Soru Rural Municipality of Mugu's farmers to find the level of gender equality in agriculture; including women role in agriculture and their impacts with what problems they facing in agriculture development.

In the research areas farmers' of this study area have been facing problems related to agricultural development for a long time. I am confident that this study will prove to be an important knowledge to researchers, policy makers, and program implementation agencies regarding the agricultural practices, impacts, problems and prospects of GRFP in Mugu district as a whole. Furthermore, the study will be help to the emergence entrepreneurs to establish agro based new venture and reforming extended business in the study areas. It will be very helpful for local government and development organizations to implement GRFP related project with social justice to farmers in rural areas. Because of the government agencies are only focused on technology transfer, even though the non-governmental organizations have helped in the development of the welfare of small farmers to some extent of organizational setup and capacity development through empowerment approach, due to the lack of basic infrastructure of gender responsive farming and agriculture development, the equitable access of women to the agricultural development and the patriarchal agricultural system a challenging issues of gender equality in agriculture. So that, the study will be helpful to combat this issues to all actors of GRFP.



### **1.3. Problems Statement**

Constitutionally guarantees the right to land access for agricultural purpose as a farmer's fundamental right (*Article-42,d*) (GoN\_CAS, 2015), but in the study areas women's absolute ownership over land is still constrained, gender equality is often limited to laws and policies, and it is not translated into reality for women. Despite the significant contribution of agriculture to the national GDP, the allocation of the national budget to this sector is comparatively lower than to the health and education sectors. Moreover, allocation of only one-quarter of the national agricultural budget is specifically assigned for gender equality issues (FAO, 2019). This indicates gaps at the policy and implementation levels on gender equity issues. Although the government has subsidized credit on agricultural machinery to make it accessible to women and reduce their workload, with a poor information and dissemination strategy at national and local levels cause severe limitations in implementation has been seems to major challenging factors of GRFP of the study areas.

In the study areas agriculture systems is subsistence based family farms, which are not capable of supporting adequate needs of farmers. Most of the crops are dominant by paddy and other primary crops due to the reason of poor accessibility of GRFP infrastructure, credit facility, lack of technological advancement and awareness, gender discrimination in agriculture etc. therefore, lack of service accessibility, credit facility, technological advancement and adaptation is challenging problems of GRFP in study areas.

For Agriculture development, the Collection center and storage house is major factors to raise farms productivity. This is the main challenges of agriculture development, because the farmers are forced to sell their produce at a lower cost than production value in the absence of storage houses and collection center. A previous study of Apple farming in Mugu District shows that, every year 4.5 tone damage and farmers can not adequate substance there family by the cause of sell their products at random price (Karki, 2019). There are forced to do, so due to the fear of damage of products in the absence of proper facilities of storage, as well as the farmers were sell product on low price in the study areas.

However the gender Inequalities in employment, division of labor, workload and wages problems is another problem in the study areas, where the women's involvement is very high in non-cash related production activities, than male. Similarly, (FAO, 2019) has found that the wage discrimination regarding 25 percent lower than male to female. Also the women have more workload of on and off-farm activities mainly due to the males out migration, where they are also forcefully engaged on triple role. Wage rate and women work load problems are other challenging problems of GRFP in the Study areas.

The problems of disparities in access and control over agriculture resources and their benefits, and decision for product sealing, weeding and investment is another problems of GRFP in study areas, where female are always dominant by male by traditional culture, values, patriarchal family systems and lack of awareness about gender equality in agriculture. As well as decision-making and participation in value chains of production is insignificant (CARE, 2015).

In the study areas, workload of women is highly preferred by gender based works division of labor, lack of technological methodological advancement in agriculture behaviors, lack of credit facility to women for commercials farming. In the study areas, there was diverse cross-culture practicing and the women's invisibility involving in both role and agriculture wage labor, work load and their wage rate is also major problems of GRFP in the study areas. Therefore, this study has been focus to find the answer to the following research question.

- i. In the locality, what practice are being practices for gender-responsible agricultural development?
- ii. How role are doing women's and men's in agricultural activities in the study areas?
- iii. What is the socio-economic status of female as well as male in society?
- iv. How currently applied gender-responsive efforts of agriculture development are being affect to the livelihood of small scale or marginalized farmer's?
- v. What problems are they facing (like; participation, technology adaptation, agriculture transformation, decision making, agro policy and scheme implementation) on the practices of Gender Responsive Farming Practices in the locality?

- vi. What are the possibilities for gender responsive agricultural development?
- vii. What measures can be adopted to transform traditional agricultural farming systems into gender friendly modern agriculture?

#### **1.4. Objectives of the Study**

The main objective of the study is to explore the modernizing trend of gender-responsive agriculture development practice with their problems and prospect in Soru R/M, Mugu. The specific objectives of the study are as par listed below.

- i. To examine the gender role of women in agriculture development.
- ii. To assess prospects and problems of GRFP in the study area.
- iii. To analyze impact of GRFP in the study area

#### **1.5. Significance of the Study**

The purpose of study aims to explorer the GR FP trend in rural areas. The feminization of agriculture status of women in national economic development is increase; but they can get less return employment in agriculture (FAO, 2019). The most of the research efforts were limited on urban areas. Because; the research and development activities are key to explore knowledge, experience, technology and ideas for inclusive development. I declared that the significant of the study will helpful to applying as approach of GRFP in rural areas. Furthermore, this study will help the planners and policy makers in formulating and implementing realistic and sustainable program through improve agriculture development activities for women's productivity, employment and income as a sustainable socio-economic development of the Nation. As well the study will not ignore to guide of further study.

#### **1.6. Delimitation of the Study**

Each and every study work has its own constrains and limitation. The study is not the exception. The topic is very vague and it requires various aspect of gender and agriculture development at National level including different ecological region, ecological zone, provincial, Rural and Urban residence and other different sectors of development. It was not possible cover all aspects in this study. However, the study is delimited on Soru Rural Municipality ward no. 8 of Mugu district.

The study is based on Soru R/M ward no. 8 of Mugu, these wards is currently emerging as the local market of the Soru R/M. There have been increasing the no. of women workers in agriculture activities in these areas by the cause of expanding of the local market (Tarapani, Sorukot, and Dhaina). However the study is emphasis to explore the gender-responsive agriculture development trends with the core objectives of finding role and status, practices, problems and prospects of GRFP in these study area with possible socio-economic impacts to the small scale marginalized rural farmers. Beside, this study is the micro level study. It is conducted only the Soru Rural Municipality wards no., 8 Mugu district with the subject matters of "Gender-responsive Agriculture Development". Subject matter wise, this study will limit to gender equality in agriculture and the status of both gender in society. The major limitation of this study can present by following heading.

- The study is based on Soru R/M ward no. 8 in Mugu District.
- This study is based on the data available from the field visit of the study area, primary and secondary data.
- This study is fully depends upon the field visit testing as well as the interviews data, response of the respondent of the study area.
- This study has concerned to explorer the GRFP modernizing trend with core objectives of the study.
- The fid survey is based on memory recall of respondents and availability of data and information has determined this scope.
- This study may have various weakness and data gap because of lack of time, finance and other methodological limitation.

### **1.7. Organization of the Study**

The study has been organized in five chapters. Chapter one contains background of the study, Problems statement, objectives of the study, significance of the study, and limitation of the study. The chapters two consists literature review including; conceptual review, Theoretical review, empirical review, policy review and research gap and conceptual framework of the study. Similarly chapter three include research design, geographical description, study area, nature and source of data, sampling procedures (population defining, sample size, sampling tools and techniques), data collection tools and techniques, data analysis and interpretation (method, tools and techniques) and ethical consideration. Similarly, the chapter four consist data analysis and interpretation of the result and last chapter five contain Summary conclusion and recommendation into the sequential orders.

## **CHAPTER II LITERATURE REVIEW**

A literature review is a survey of scholar source on research topics to gain emergence knowledge, ideas, method and gap in the existing research .The study has been survey the various primary and secondary source of literature on a topic of gender, and agriculture development .This chapters has comprised on different six sub-topics based on the literature survey including conceptual review, Theoretical review, empirical review, policy review, research gap and concept of the study framework of GRFP.

### **2.1. Conceptual Review**

Gender responsive farming practice is originated in the 1980s decade with theoretical based of GAD with the socialist feminist thinking. It always seeks to empower women and transform uncial power relation between man and women. GRFP is focus men to achieve gender equality in agriculture by socio-economic empowerment of women. The concept of GRFP research is comes from my locality scenarios of agriculture development practices. There agriculture is major sources of family income. Female farmers involve in agriculture than man. Women's socio-economic status is very low; they have lack of access to productive resources of GRFP. So that, the study has conceptually developed to explore the trends of GRFP and their challenging problems, as well as changed better of GRFP as the tools of gender equality and economic empowerment of those farmers in agriculture.

#### **2.1.1. Historically Context of Agriculture Development**

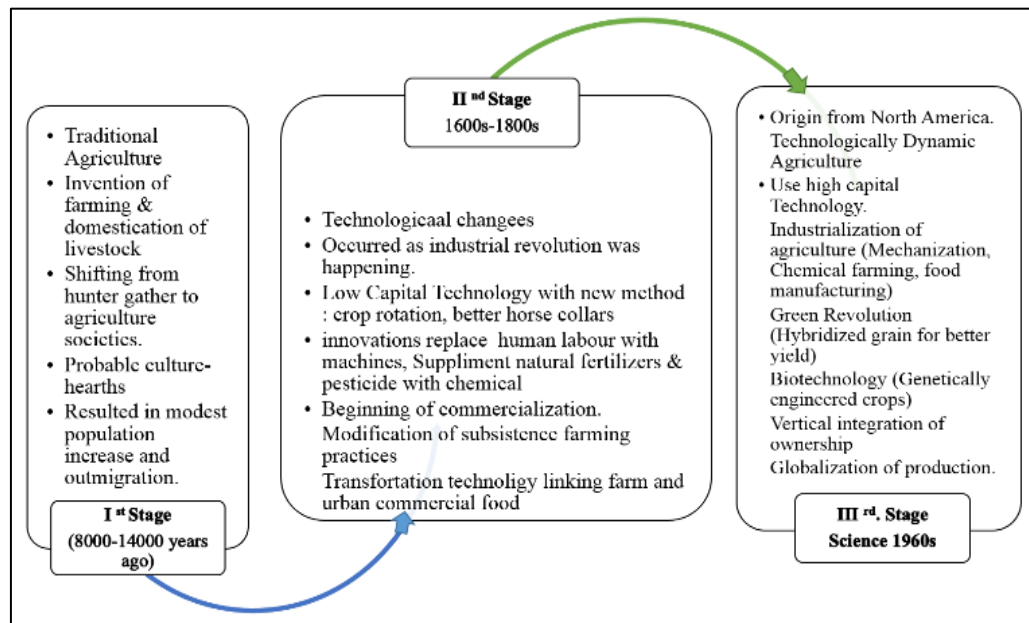
Historically, gender role, relation, position and status is changed in the different mode of production in the human civilized society .Agriculture development practices being very advanced from hunting and gathering society to industrial society .The division of labor in hunting and gathering society has assigned role to respective gender on the basis of "hunting and gathering ."The various anthropologist and sociologist are stated that society is less gender based discriminated society by the cause of access to control resources and factors of production .Industrial agriculture based on large-scale monoculture in the twentieth century came to dominate agricultural output, though about 2 billion

people still depended on subsistence agriculture into the twenty-first (Acharya, 2017).

From the 1.5 lakhs years ago the man who evolved as a Monkey, and they started to move standing erect own his feed, such a man is called as a ‘Homo-erectus or ‘Java Man .’Late all the Homo-erectus ’transfer into ‘Homo Sapience’, it means ‘a learning habit .’Than Homo Sapience also transfer into ‘Homo Sapience-Sapience .’This ‘Homo Sapience-Sapience ’known as modern man.

The historical context of agricultural development reveals that the evolution of human civilization took place together, but the development of agriculture in terms of changing human lifestyles seems to have taken place only about

**Figure 2. 1: Stages of Agriculture Development or Revolution.**



12,000 BC year's ago.As a result, people changed from nomadic hunter-gatherer lifestyles to permanent settlements and farming.Scholar have offered multiple hypothesis to explain the history of agriculture .Agriculture farming were began independently cultivated in at least eleven separate regions in the world, with start from animal to crops production through systematics ways of human evolution .

In Neolithic periods; hunting gathering to farming practices of agriculture revolution were as a creation .Then, wild stands that had previously been harvested started to be planted, and gradually came to be domesticated .By around 13,000 BC to 11,000 BC year ago dog, sheep and goat were domesticated in

Mesopotamia, Iran and Eritria, and they were collect wild grains and get at least 11,500 BC year ago .Nascent farmers began to plant with farming practices of Neolithic founder crops emmer wheat, einkorn wheat, hulled barley, peas, lentils, bitter vetch, chickpeas, and flax –were cultivated in the Levant .Cattle were domesticated from the wild aurochs in the areas of modern Turkey and Pakistan, similarly; Pig production emerge in Eurasia, including Europe, East Asia and Southwest Asia, where wild boar first domesticated about 10,5000 year ago .In the Andes of South America, the potato was domesticated between 10000 to 7000 BC years ago, along with beans, coca, lamas, alpacas, and guinea pigs .Around 9500 – 9000 BC year white cultivation, sugarcane and some root vegetables were domesticated in New Guinea .Then, around 7500-5600 BC years ago were started cultivation of crops, Sorghum was domesticated in the Sahel region of Africa )7000 BC(, In Mesoamerica, wild teosinte was bred into Maize by 6000 BC years ago .Cotton was domesticated in Peru by 5600 BC years ago and also Cotton were independently domesticated in Eurasian .In 2900 BC year ago .

Neolithic settlements was more permanent than camps of hunting populations needed to move periodically by soils deteriorated practiced slash and burn in Europe .Nile settlements more permanent by river kept soil fertile .The pastoralism is a latter development stage of agriculture .In this period were practices of agriculture activities were mixed farming, combining cultivation of crops and stock raising as a common Neolithic pattern .Nomadic herders roamed the plains of Europe and Asia where the horse and camel were domesticated .

Agriculture during the Roman Period roughly defined as 2500 BC -500 AD with introducing of Metals.In this stage the farmers were use low capital technology such as Ox-drawn plow, metals tools, and inputs, trade system to supply grain to many cities, labor use, tenants paid, and technologies for agriculture development .During the Roman period agriculture trade in Wine and Olive oil mention in Egypt, Rye & Oats widely in North Europe .Butter system were followed by fulfilling the needs of farmers.China, Egypt, and Near East allowed more land to cultivate through irrigation system.Similarly wind mill, watermills, and fertilizer were introduce at the end of Roman Period.

In feudal stage of agriculture development system were mostly dominant by feudalist. The King owned all the land. He retained 20% of this land for his own use. The king granted the rest of his land to the church about 25% and about 55% to Barons. The tenants-in-chief guaranteed land to their under-tenants in return by peasants provided rent or labor services. Egypt was sufficient producer of Grain to sell wheat internationally, and the Egypt and Spain extended irrigation

In agriculture society; the chine of gender based discrimination is high than primitive society; because the women are backward to access control over the resources than male. And socio-culturally, the faith established by conservative society as "Male are more than Female ." This as entropy as hinder to achieve the goals of GRFP. Only small portion of female came into the economic activities in industrial society without equal motivation, support and wage to the women labor by the cause of equal wages for equal work. On the other hand, even in economically empowered society, belief only capitalist view and style, when they belief that women as the commodity of production. And social justice could not be replaced in those societies. In this view, women's development and development of society began to be concerned by development efforts (Acharya, 2017, pp. 10-11).

Scientific stage of agriculture expending by 16th century in Europe and North America. In 1700s revolution occurred from the Renaissance and Age of Enlightenment in Europe. After the World War II, there is so many revelatory efforts such as Green revolution by Norman Baurlog, White revolution by Verghese Kurien, Yellow revolution by Sam Pitroda in 1990s decade. Blue revolution started in 1960s by Dr. Arun Krishnan, Pink Revolution, Brown revolution and gray Revolution. This revelatory efforts of agriculture development has helps to industrialization of agriculture )mechanization, Chemical farming, food manufacturing(, technologically dynamic agriculture, use high capital technology in farming and farms products, producing hybridized grain for better yield, biotechnology innovation )DNA(, vertical integration of ownership and globalization of production. Some major highlighted change are; Limestone on soils in late 1700s, cast-iron plow; 1797 by Charles new bold and John Deere improved it in 1830s & made it from steel-seed drill in early 1700s also its reaper by Cyrus McCormick in 1831. By late 1800s Steam power replaced animal power



in drawing plow and operating thrashing machinery .Science and technology developed for industrial purpose in agriculture, result in agribusinesses mid-20th century .Poisons for pests developed in 19th century improvements in transportation in 19th and 20th.

The history of Gender Responsive Farming Practices in Nepal has been started in 1973 BS by ten year master plan of agriculture development by Priminister Chandra Shemsher .Nepalese government has been take initiative to agriculture development such efforts are; tea cultivation in 1920 BS, Coffee cultivation from Gulmi in 2011BS its commercially by 2041BS, Agriculture Census from 2018 BS, Land Act 2021, Agriculture Bank, 2024 , Subsidies on Manure Account in FY 2030/03, Silk farming started in 2041BS, Nepal Agricultural Research Council (NAARC) has establish in 2048.Similarly National Tee and Coffee Development Board 2050 jesth 20, Jaitun cultivation in 2052, Commercially Agriculture and Business Project has launched in 2009, HIMALI Project in 2011, Agro Insurance in 2069, and crops and livestock insurance has also add in agro insurance by FY 2070 /2071 as well as 75 %subsidies provide in FY 2071/072 in this scheme.

### **2.1.2. Agriculture Development and Economic Growth**

In this section has presented factual observations describing with a leading question about ‘how agriculture development contributes to economic growth’ and especially to gender responsive pro-poor growth. Looking at agricultural development and economic growth in the world, the countries that are emerging with strong economies are at the forefront of agricultural production. Agriculture is a basic resource to meet the daily needs of poor farmers by providing employment opportunities. As agriculture is also the basis of economic development of developing countries, the state should provide assistance to poor farmers in the form of technology, marketing and incentive grants not only to supply food among resources and population but also to increase farmer productivity, reduce poverty, increase investment and supply labor. Agriculture development has been seems to be driven by modern agricultural activities such as producing food to expand the high-income population, expanding the market for industrial products, providing export income to pay for imported capital goods, and producing primary materials for agricultural processing.

Many early analysts (Boserup's, 1956, Pasa, 2017, Schultz's, 1979, Lewis, 1954) highlighted agriculture development through agricultural intensification, technological interventions, dynamic use of land and use of modern technology for industrialization and commercialization in agriculture. Because, resource and population pressure gone through proportional ways of economics growth, population does not go down. It rather leads to various technical and other changes which result in agricultural growth and increase in food supply.

There seems to be a paradox in the role of agriculture in economic development. Because it that as agriculture becomes more successful, its importance declines in the overall contribution to GDP. Population pressure is another segment of economic growth through agriculture intensification, because the population growth trend is some time very rapidly in urban centric increasing than rural. The number of poor people living in cities has been grown parallel to increasing urbanization. Despite this, the share of poor in rural areas remains higher than in urban areas. So that, the main message here is that for poverty reduction, it is important to focus on rural areas by Gender Responsive Farming Practices activities likes planning, participation, gender friendly technology and agro inputs, marketing, grants, awareness about land ownership, investment etc.

In research areas most of the female farmers are take share of involvement in agriculture than male, they are playing both gender role in her family. due to the cause they have achieve expected outcome agriculture, because women workload reduce his/ her productivity, patriarchal family farming system is another constraint of gender responsible farming practices in this areas. This system has been ignored gender equality in agriculture by factors of production. Similarly rural socio-culture practices and faith is another obstacle of grfp in this area, it is directly related to farming behavior, food habit to the women, decision, control, participation, labor force, and income.

In the research areas, the potentiality of Gender Responsive Farming Practices through economic growth is highly probable. This areas is suitable dynamic land, alpine Himalayan climate, irrigation facilities, animal domesticate for compost manure (organic), but in this areas various forms of migration such as education, employment, health, business etc. has been supporting to substances

based family farming. Therefore, the government should have necessary to approach agriculture revelatory project for economic growth through agriculture development.

### 2.1.3. Top Five Agriculture Producers Counties

Agriculture is an integral parts of world economy, mainly for developing countries. It is the primary sources of income employment, food security and basic needs fulfillment by agriculture in the world. According to World Bank (WB) the share of agricultural population is 67% of world total population in recorded 39.4% of the GDP and in the 43% all export include agriculture commodities. Mainly Developing Agricultural Producing countries depend on agriculture import, and food certainty and many emerging countries will not refine with our significant increase in local production.

**Table 2. 1: Top Five Agriculture Producers Countries.**

Country	GDP Contributions	Farming Land	Population	Employment %	Major Products
China	8-9% 14.34 Trillion \$	57% 9.6 Million Km <sup>2</sup>	1.4 Billion	300 Million Jobs	Rice, Pork, Chicken, Milk etc.
India	16-18% 2.869 Trillion \$	60-65% 3.287 Million km <sup>2</sup>	1.366 Billion	60-65%	Rice, Wheat, Potato, Milk, Sugar etc.
USA	1-2% 21.43 Trillion \$	925 Accor 9.834 Million km <sup>2</sup>	328.2 Million	11%	Maize, Rice, Sugar, Cheery etc.
Indonesia	15% 1.119 Trillion \$	1.905 Million km <sup>2</sup>	270.6 Million		Pam oil, Rubber, Clove
Brazil	6% 1.84 Trillion \$	31% 8.5 Million km <sup>2</sup>	211 Million	10% Population	Soybean, Sugarcane etc.

*Source: Pasa, 2020 as cited in WB, 2019*

China is the richest and largest agro-producing countries in the world. It has 8-9% GDP contributions of 14.34 trillion \$ total income, 54% of 9.6 million km<sup>2</sup> farming land, 1.4 billion population involved in agriculture and directly 300 million employment opportunity with their major products like Rice, Pork, Chicken and Milk etc. Similarly, India is another richest and largest agro-producing countries. It has 16-18% GDP contributions of 2.869 trillion \$ total

income, 60-65% of 3.287 million km<sup>2</sup> farming land, 1.366 billion population involved in agriculture and directly 60-65% employment opportunity with their major products Rice, Wheat, Potato, Milk, Sugar etc. Likewise, USA is a role model countries in the agriculture sector, and developing continually with enraging rate scientific soil, crop analysis, more investment and innovation of technology. Indonesia has 15% GDP contributions of 1.119 trillion \$ total income, 1.905 million km<sup>2</sup> farming land, 270.6 million population involved in agriculture their major products like Pam oil, Rubber, Clove etc. Innu shall, Brazil is the hysterically one of the best agricultural countries on which its economy based. Around 31% of the farming land is agriculture occupied in Brazil. It has 6% of 1.84 trillion \$ of total income, and total 10% population has directly employed in agriculture sector. Brazil started farming practices some 12000 years ago with many crops including Soybean, Sugarcane, Potato, Maize, Peanuts, and Tobacco etc.

#### **2.1.4. Gender Responsive Agriculture in Global Context**

Women make important contributions to the agricultural and rural economies of all regions of the world. However, the exact contribution both in terms of magnitude and of its nature is often difficult to assess and shows a high degree of variation across countries and regions. 84% women engaged in agriculture and allied activities in the world, and they producing 80% of food for developing countries and half of the world (UN Women, 2014). According to SOFA team and Cheryl Doss, 2011 highlight his report on The Role of Women in Agriculture has the share of women in the agricultural labor force just over 40 percent of the agricultural labor force in the developing world, where the female share of the agricultural labor force has been increased during the past three decades.

The 35% share of women employment in agriculture in development countries, similarly; 68% female and 39% male are take opportunity in South Asia region. The women share of food production about 60 % to 80% of food and plant growing from seed that are planted by women hand. Approximately 400 million poor people they share responsibility with men and children for the care of animal and particular species. About 30% of women employed in fisheries and aquaculture including primary and secondary activities from total 135 million

employed in this sectors. Women have own less than 20% of the world agriculture land. A survey of 34 developing nations by the United Nations Food and Agriculture Organization puts that percentage as low as 10. This is staggering if you consider that half of the world's population is women. (FAO, 2011).

The major highlight efforts of gender responsible agriculture development has been started from early 1970s by Esther Boserup contribution on 'women role in economic development'. Due to the effort, various feminist and international women related organization or agencies such as UN Women, UNESCO, WB etc. has taken initiative of gender equality, equity, access and participation passage through the various timeline. This GRAD efforts are; WID (1970s), WAD (1980s) and GAD (1990s). Similarly, first world women conference in Maxico (1975), second world women conference in Copenhagen (1980) Third world conference in Neirabi (1992) and 4<sup>th</sup> world women conference in Chaina (2012) focus to BPFA. In 1979 CEDAW adapted by UN general assembly. MDGS (2000) identifying gender equality as key objective in development efforts.

#### **2.1.5. Gender Responsive Agriculture in Nepalese Context**

Nepal is an agricultural country. Where 83% of the population's main income is agriculture, 73.9% of the population is dependent on agriculture. Out of the total 83% of the agricultural population. Nepal has the highest percentage of women working in agriculture. An estimated 83 per cent of women work in agriculture for a sustained livelihood in the Himalayan country. Experts ascribe this increase to the growing migration by the men to seek work outside their own country due to the prolonged conflict and rising poverty. Due to the mass exodus of men abroad in search of lucrative jobs, the agriculture sector is being feminized in Nepal. Various government statistics show that the participation of women in agriculture is increasing. From 36 percent in 1981 to 45 percent in 1991 and has hiked up to more than 50 percent in 2016. Similarly, Sixth Agricultural Census data shows that the participation of women in formal agriculture sectors is 19% and that of men is 81%, so that, we understand that the women is still limited in low income family farming (FAO, 2019).

As per the 15th plan, the contribution of agriculture sector to the GDP is 27.6 percent and the target to achieve it to 23% by the end of the plan. Out of the

total 2.52 million hectares of arable land (17.97%), 66% of the land is irrigated and only 36% of the land has the facility to irrigate in regularly 12 months. About 60% farmers are victim by out of food security level from total 38 lakhs 31 thousand agriculture family in Nepal. The agriculture productivity by major crops; Paddy, Wheat, Maize, Millet, Barley and Fapar is 3.1 matrikTon per hector.

Shifts in the traditional division of labor are noted, in research areas many women taking up additional responsibilities such as ploughing, marketing, participation and decision for farming due to job-related out-migration of rural men. The women's ownership of land is increasing by female-headed households. Ownership of the land & other physical property is the major factors to decide agriculture transformation by effective and efficient institutional role. According to census 2011, only 19.0% of women HH enjoy ownership over land and other property. While it was only 10.8 percent in 2001 (CARE, 2015 & IOM, 2016). The earlier feminist scholar (Rijal, 2017) has present only 9% have ownership of land, while female ownership of both land and house is associated with 10.7 percent, comparatively terrain regain has relatively positive condition as compare to other ecological zones. The scholar found province six (Karnali) has comparatively negative situation as compare with other province. And scholar highlights the socio-cultural barriers are still a major challenge for women's ownership of property in Nepal.

As per census data, wages in agriculture and non-agriculture sectors have increased more than fourfold over the period 1995-2011 (CBS, 2014c). However studies shows that gender-biased wage gap epically in agriculture and women received wage 25% lowest than man. Despite the legal provision of equal wage between sex, but due to the cause of farms managed by women produce less value per hectare than those managed by men, existence of gender inequalities, particularly in accessing, adopting and using technologies, farming and marketing decision, triple-work burden, and restricted opportunities for setting-up micro-enterprises and agriculture businesses to women.

Gender responsive agriculture budget and grant facility is another factor of GRFP. About 22% of Nepali farmers have reviled the grant facility from banks while the other 78% have availed it from unofficial sources. The total

appropriation budget for agriculture in the Fiscal Year 2021/2022 is 45.9 billion while in the Fiscal Year 2020/2021 it is Rs.41.40 billion. In the FY 020/2021 there is directly 562.69 (-3.85%) billion, indirectly 517.95 (-4.97%) billion and 394.01 (-2.16%) billion Neutral Budget has allocated by gender responsive from the total 1474.65 (-3.80%) Billion Gender budget (FAO, 2019).

Government of Nepal has taken initiative of women empowerment by various agriculture project. Such as; One Village One Product (OVOP) program started in FY 063/064 in Nepal by successful practice of Japan. The project provide opportunity to earn income by the reason of found opportunities in the OVOP activities to use the time and manual techniques to women and men by equally participating in agriculture production activities. Furthermore, Government of Nepal has been implementing Prime Minister Agriculture Modernization Project (PAMP) in BS 2073 push 6, with targeted to implemented one agriculture development project in each province.

The various assessment has highlights gender-biased gaps at policy and legislative levels. For example, at the constitutional level, access to land for agricultural purpose is considered a farmers' fundamental right; however, women's ownership of land is still constrained. Therefore, gender equality often only exists in laws and policies, and is not adequately implemented on the ground for the benefit of rural women.

## **2.2. Theoretical Review**

### **2.2.1. Theory of Agriculture Development and Gender**

Bosrup's theory of agriculture changes 1956; emphasize on "Agrarian change, through agricultural intensification and technological interventions". Intensification of agriculture to population growth is the prime cause of agricultural change is of great importance also the population pressure is a stimulus to technological change in agriculture not a cause of disaster; when population growth increase food demand for the agriculture development and puts pressure on food supply. Population growth facilitates the division of labor and the spread of communications and education in agrarian behavior. Sustained population growth has better chance to foster agriculture development through dynamics use of land (Bosrup's, 1956). This From GRFP prospective, the theories also ignored gender factors to agriculture change. In rural areas must of the

surplus females and male are engaged, and theory focus to technological intervention. If the technology is not gender friendly there cannot able to achieve goal of GRFP. Marxist focused to break cabalist economics system to socialist for to solve the problems of population growth, because they have come productive tools by born, not only mouth as consume factors.

The cultural ecological theory (Cross-Cultural Theory) of the sexual division of labor in agriculture replicates well across several regions of the world and has strong explanatory power. The theory support for Boserup's idea that there are linkages between agricultural intensification and the division of labor in agriculture, the theory is a major modification of Boserup's theory. The theory find that population density has only a weak effect on the sexual division of labor, and the theory introduce two new variables are number of dry months and the importance of domesticated animals to subsistence, which find to be the strongest predictors of female participation in agriculture. Both have specific interpretations in terms of plausible time allocation processes. A long dry season causes seasonal time pressures, requiring males to increase their participation in agriculture. High dependence on domesticated animals increases the time women spend caring for animals and processing animals' products, resulting in decreased female participation in agriculture (Michael & Douglas, 1984).

Nepalese' rural economic is substances nature, which is not use of reproducible capital, lowest output per head, low average productivity of labor and people are generally back warded, illiterate, & unskilled. And the people behavior on agriculture production is segregated by sex, and labor market hierarchies related to raise, class, cast and community/nationality (Beneria & Sen, 1981). Majority of the agriculture labor are unskilled and they are decide of migration from rural to urban and also to abroad by the cause of poverty, unemployment, economic, education and demography factors (Harris-Todaro's, 1970). The situation has created high ratio of land abandon and farmers has been involving to voluntary works as a substance livelihood.

From GRFP prospective every place is million possibilities of economics development by enjoying both farmers through the transforming policy of agriculture. Therefore, the model has assumption simply on migration; it is not



focusing to their impact and mitigation measure by gender prospective on rural economic development through GRFP practices. The highly available of surplus labor are supplied on capitalist sectors for economic development on higher wage with depend on substance sectors; also marginal productivity is higher than capital wage with more people are employed in this sectors. Prof. Lewis' steted that, - "the unskilled labor is not bottleneck to economic development in UDCs. As well as largely depend on the generalization and utilization of capitalist surplus (Lewis, 1954).

Agriculture is important segment of feudal (traditional) economy; where, that necessary to imply a transformation of agricultural through the mechanism of investment, notion of approach, farm size, control of economic decision & incentives, technological change & productive investment and gender equality on access and control of resources and investment in human capital for transformation of feudal to capital economy. The Schultz's theory of agriculture transformation focuses on technology advancement and investment for agriculture transformation. Furthermore, Prof. Schultz' emphasized political power and economic incentive, and both research and development are necessary to adopt modern agriculture factors for transformation of traditional to modern commercial farming. But, Prof. Schultz' has ignore/ least importance prior to gender issues in agriculture development, in terms of gender friendly technology, access to resources (factors of production) and control benefits from gender prospective.

### **2.2.2. Gender Inequality Approach**

The Roots of liberal feminism lie on the liberal school of political thought which streets on the rationality or the justice for the human being. It is the socialization process of assigning specific gender roles that creates different expectation from men and women. In most of the case the discrimination has prevented women from having equal opportunity and benefit unequally (Ritzer, 1992). Similarly, Radical feminism ideology is developed during the period of 1960s and 1970s. They were emphasis not only to equal rights in education; political, legal system would bring women in equal power with men. And sex/gender relationship that causes women's oppression

Marxian feminism bring together Marxian class analysis and feminist social protest and this amalgam produces not and intensified theory of oppression rather a more muted statement of inequality (Barrett, 1989; Mitchell, 1975; Sargent, 1981). Whole pure Marxian feminism is relatively dormant theory in contemporary feminism yet its tradition is important to influence the socialist feminism which occupies an important place in academic feminism (Ritzer, 1992). Socialist feminism emerged as a result of dissatisfaction with the gender-blind nature of Marxist feminist's though. Contemporary feminist argue that although Marxist feminist explain how capitalism separates workplace from homestead, they fail to explain why and how capitalism favors men in the work place and women in the homestead at the first place. The economic and materials relation cannot be changed unless the ideology is changed. Women need to fight two wars simultaneously to be liberated from the source of oppression from both patriarchy and capitalism (Ritzer, 1992).

The third -wave feminists insist to study women from the perspectives of the most unprivileged, oppressed and subordinated group of people (men and women). It raised the issue of diversity among women that created different experiences of domination and subordination not expressed by men's oppression but women as per their origin and occupation (Ritzer, 1992). Thereby, The Psychoanalytic feminism is drawn mostly from the philosophy of Sigmung Frud. It emphasizes on the emotional aspects of personality. The psychoanalytical feminists deal with a particular type of patriarchy where men subjugate women as a universal system pervasive in the social organization with has continued overtime and maintained over well. This whew contains that all men, in their daily actions work empathetically to sustain the form of patriarchy and women accept their subordination. Even if they try to resist it the total system of patriarchy does not let them do so (Ritzer, 1992).

Post-modern feminist ideas was developed by Foucault, de behavior, as well as Derrida and Lucan. Postmodern feminist accept the male/female binary as a main categorizing force in our society. They criticize the structure of society and the dominant order, especially in its patriarchal aspect. . Postmodern feminism is the ultimate acceptor of diversity. Multiple truths, multiple roles, multiple realities are part of its focus. "Post-structural feminism offers a useful philosophy for

diversity in feminism because of its acceptance of multiple truths and rejection of essentialism" (Olson, 1996).

The minority women leaders were not arguing for bigger political concessions that could strategically shift the balance of gender politics (i.e. power) but oblivious to ills in social structures and government system, and seeming contented with status quo, all they had asked for were modest quotas and representations in local governance. As though those were the most strategic and decisive of all solutions for minority women's and their communities' empowerment, in fact, the modest demands were supposed to be also answers to peace and social justice (Bhattraï & GC, 2019). In GRFP always seeks to gender equality in agriculture and women empowerment. So that this inequality approach in agriculture help to measure problems to better practices of GRFP.

### **2.2.3. Effect to Address Gender Issues (WID, WAD & GAD)**

As globally, various literatures pointed out as the subordination/obstacles of women's development by the cause of backwardness, high social servitude, lack of participation of decision process, social discrimination, high workload of women, poor access to control over the resources, lack of ownership of property, employment, wage discrimination and participation. As well as involve in both reproductive and reproduction work and not to take share in National development (Acharya, 2017). Similarly the "Modernization Theory" (1950) has prior to economic development, but not to socio-culture, environment and political sphere of development through the "trickle down approaches". In this regard, neither the mainstreaming development direction pathway was not absolutely grown nor to target of gender oriented development efforts. UN declared as "UN decade for development" in 1960s and "UN decade for women" (1976-1985s) in (1975). Then, the feminist movement was growing with implementation of WID (1970) concept. The slogan of development was focus to *"Gives a man a fish and you feed him for a day, teach a man to fish, and he will eat lifetime."* (CCIC, 1991; 154) and also cited on (Acharya, 2017, p. 202).

The government has attempts to take various action on address the gender issue in mainstreaming process through international treats and commitments i.e. Platform of Action (1975), Program of Action (1980),WAD (early 1980s)

Forward looking strategy (1985), BPFA (1995), CEDAW (1991), and MDGs (2002) to SDGs (2016). And other treaties against discrimination like equal wage, human right, citizenship right, voting right convention etc. of women. In earlier stage of gender mainstreaming, the efforts basically address gender issues with the philosophy of human right, which include fulfillment of the basic needs and poverty alleviation in 1970s decade.

The women year's (1985) were celebrated for the purpose of analyzing and publishing the women related issues and realized the role women's in production for National economic development in 1980s (Acharya, 2017). In present era gender issues are extent wider with the concentration of equal participation, empowerment, gender equality and social inclusion (GESI), and freedom from all forms of discrimination and violence.

#### **2.2.4. Gender Analysis Framework and Agriculture Development**

Gender analysis is type of socio-economic analysis. It is intended as a tool to illuminate the links between the existing gender relations in a particular society and development problems it needs addressed. The gender analysis identifies the types of gender differences and inequalities that might otherwise be taken for granted - such as how men and women have different access to and control over resources, carry out different roles, and face different constraints and receive different benefits. There is five of the commonly used gender analysis framework (March, et. al, 1999).

##### **2.2.4.1. The Harvard Analytical Framework**

It is one of the first analysis frameworks, and working in collaboration with the WID developed by researcher of the Harvard Institute for International Development in the USA in 198. It represents one of the earliest efforts to systematized attention to both women and man and their different position in the society. It is based upon the position that allocating resources to women as well as man in development efforts makes economic sense and will make development itself more efficient- apposition labeled as the "efficiency approach". The framework aims to help planners design more efficient projects and improve overall productivity. It does this by mapping the work and resources of men and women in a community and highlighting the main differences (March, Smyth, &

Mukhopadhyay, 1999). The framework is concerned with adequate data collection at the micro-level for gender research.

The framework is a useful way of organizing information and can be adapted well to agriculture and other rural production systems, with their major four components i.e. activities, access control over resources, influencing factors and project cycle analysis. Data is collected on men's and women's activities which are identified as either 'Productive' or 'Reproductive' types, and is then considered according to how those activities reflect access to and control over income and resources, thereby "highlighting the incentives and constraints under which men and women work in order to anticipate how a project will impact their productive and reproductive work activities as well as the responsibilities of other household members" (Overholt, 1985).

#### ***2.2.4.2. The Moser Gender Planning Framework***

The framework is developed by Caroline Moser as a method of gender analysis at the development planning process with a link to examining women's role. In reaction to the Women in Development (WID) approach, which in the 1970s encouraged treating women's issues as separate concerns, the Gender and Development (GAD) approach argued for an integrated gender-planning perspective in all development work, concentrating on the power relations between women and men. This approach challenges many of the assumptions behind traditional planning methods (March, Smyth, & Mukhopadhyay, 1999).

The Moser Framework was part of this challenge and was presented as a mainstream planning methodology in its own right. The Moser Framework aims to set up 'gender planning' as a type of planning in its own right: 'The goal of gender planning is the emancipation of women from their subordination, and their achievement of equality, equity, and empowerment. The Moser framework questions assumptions that planning is a purely technical task. Moser characterizes gender planning as distinct from traditional planning methods in several critical ways: first, "gender planning" is both political and technical in nature. Second, "conflict in the planning process". Third, "transformatory processes", and Fourth, it characterizes planning as "debate".' (Moser, 1993, p. 83).

#### **2.2.4.3. Gender Analysis Matrix (GAM)**

Gender Analysis Matrix (GAM) was developed by Rani Parker, in collaboration with development practitioners working for a Middle Eastern NGOs as quickly employed tool to identify how a particular development will affect women and men for a framework appropriate to their grassroots work. It is very much influenced by the reality and ideology of participatory planning; with aims to help determine the different impact development interventions have on women and men, by providing a community-based technique for identifying and analyzing gender differences and to challenge a community's assumption about gender. Unlike some of the other tools described, this one is explicitly intended for use by the community for self-identification of problems and solutions. It can also accommodate the constraints imposed by shortage of funding and time, illiteracy, and insufficient or non-existent quantitative data on gender roles (March, Smyth, & Mukhopadhyay, 1999) with the principle of GAM. These are;

- ❖ All requisite knowledge for gender analysis exists among the people whose lives is the subject of the analysis.
- ❖ Gender analysis does not require the technical expertise of those outside the community being analyzed, except as facilitator.
- ❖ Gender analysis cannot be transformative unless the analysis is done by the people being analyzed.

Each project objective is analyze at four levels of society; women, men, household and community by various groups of stakeholders. They carry out the analysis by discussion each project objectives in terms of how it impacts on men's and women's labor practices, time, resource and other socio-culture factors, such as changes in social role and status.

#### **2.2.4.4. Women's Empowerment Framework**

Gender analysis framework is focus to women's development from the helps of men's in every stage of development by the provision of education, awareness, rights and opportunity should be provide for employment (Acharya, 2017). "The development efforts has not able to guide kill fish, they provides fish to people by self". As well as they not analysis capacities and possibilities of the rural people just by deliverable as trickle-down approach of gender subordinate. Therefore; there will be needs of women empowerment from gender prospective and the efforts should start from what they have possibility for empowerment. The

approach focus without the empowerment of men, there can be a holistic development (economic, social, psychological and political) of women (Acharya, 2017).;

*Keller & Mbwebe, 1993 - "Empowerment is the process whereby women become able to organize themselves to increase their own self-reliance, to assert their independent right to make choice and control resource which will assist in challenging and eliminating their own subordination" (Sociology of Gender, p. 257).*

Finally; women empowerment concern to self-reliance, dependent their right duty and responsibility and equal access to control resources use and benefits to the poor and back warded women's by equitable participation in development process with helps their man's.

#### **2.2.4.5. Social/ Gender Relation Approach**

The Gender relation approach was developed by Nail Kabeer at the institute of development studies in Sussex, UK that draws on explicitly structural feminist roots. The framework find the gender relation within the every aspect of private and public life of people for replace to recognized equitable development, and focusing on subjective analysis of women's and man's status, roles and accessibility in every stage of the society or, with focus to examining social relation for gender analysis (Acharya, 2017, p. 252). The framework helps to find; how gender role and relation are construct in the society? Which gender has access to resource? How is their use and benefit? What institution and what types of relation and role have been assign to male and female on the basis of sex? What types of legal provision are arranged? And effects on individual, household community market and state level?

finally, the framework can be conclude that what efforts should develop for gender equality through analyzing their gender inequality, discrimination, Subordinate, Esterification, working nature, division of labor, employment, investment, income, access and control over resources, education/ knowledge and skills of all gender aspects (Acharya, 2017).

### **2.3. Empirical Review**

#### **2.3.1. Agriculture Development from Gender Prospective**

In Nepal, agriculture contributes one-third of the gross domestic product (GDP) and about three-quarters of the population work in the sector. The role of

women in the sector is crucial given that over 80 percent of women are employed in agriculture. Yet, the conditions of employment for the majority of rural women are perilous, since they mainly work as subsistence agricultural producers. (FAO, 2019). And the Nepalese economy is still dominated by agriculture sector and agro-based industries. More than 64.0 percent (54% Male and 76.6% female) people depend on agriculture (i.e. 6.3 million) and agriculture provides net employment to 50.5 percent male and 73.6 percent of total 60.4 percent people and the bulk of the country's export earnings (CBS, 2014, pp. economic characteristics table no, 55). 76.6 percentage female population contain from total 64.0 percentages of economically active population on agriculture forest and fishing (CBS, 2014, Vol. 3, Table 14). Also; contain agriculture sector were regard as one of the oldest people have chosen as a profession. Since the production from this area was the only medium to solve the problem of hunger among the human entity. In Asia women account approximately 50 percentage of the overall food production in the region with considerable variation in the country. For example women comprise 47% of the agriculture labor force in Phillippines, 35% in Malaysia, 54% in Indonesia and over 60% in Thiland. In Southeast Asia Women play a major role in rice production particularly in sowing, transplanting, harvesting and processing (Karl, 2009).

UN decade for women (1995) pointed out that of all hour worked throughout the world, women contribute about two third. Most of the work is done by living in rural areas. But women received one tenth of world income and own less than one percentage of world income. According to the FAO (1995) women produce more than 50 percent food grown by worldwide. The gender disaggregated data, together with field studies, participation rural appraisal an gender analysis, make it possible to draw a number of conclusion about the extent nature of women's contribution to farming, foresting, fishing may be underestimated as many surveys and census count only paid labor. Women are active in both the cash and substances agricultural sector and much of their work in producing food for household and community consumption (FAO, 2011).

The shortage of labor has also caused the abandonment of rural agricultural land, contributing to a decline in agricultural production (FAO, 2019). Yet, women's ownership of land is increasing: female-headed households



accounted for about one-fifth of total agricultural landholders in 2011, which represents a rise of 10 percent compared to 2001 (FAO, 2019). This is an important development, as land-ownership rights remain a major constraint for most women. As per census data, wages in agriculture as well as in non-agriculture sectors have increased more than fourfold over the period 1995-2011 (CBS, 2014). However, studies have shown a persistent gender-biased wage gap throughout the country that is especially visible in agriculture: women receive wages about 25 percent lower than men, despite legal provisions for equal pay between the sexes (FAO, 2019). The entrepreneurial potential of women still remains largely untapped. Evidence shows that in Nepal, farms managed by women produce less value per hectare than those managed by men, suggesting the existence of gender inequalities, particularly in accessing, adopting and using technologies (FAO, 2019). Rural women are constrained by their weak decision-making and bargaining power, triple-work burden (productive, reproductive and community work), limited knowledge about market demand and supply, as well as restricted opportunities for setting-up micro-enterprises and agriculture businesses (FAO, 2019). The Assessment highlights gender-based gaps at policy and legislative levels. For example, at the constitutional level, access to land for agricultural purpose is considered a farmers' fundamental right; however, women's ownership of land is still constrained. Overall, gender equality often only exists in laws and policies, and is not adequately implemented on the ground for the benefit of rural women (FAO, 2019).

The value of women's work and start counting production, not just profits for to achieve economic equality. In her paper Shiva has focus to anti-“empowerment,” anti-“jobs,” anti-“formal economy,”. “Globalization” and diversity Challenge is importance factors of gender equality in economics that effect bearing by women of women work load and capacity. On Her view the formal economics is really a destructive economy. Because women living under principles of autonomy and dignity are simply living in a different system where the power of men over women is not the organizing principle (Shiva Vandana, 2009).

Modern agriculture farming practices depend upon adaption of modern tools and technologies of agriculture development (Pasa, 2017). Many developed

countries are applying modern agriculture technology. They are producing crop a lot in a limited plot of fields and with limited manpower for mass grain production with limited production components whereas least/developing countries are still suffering from large amount of food deficits by using traditional and indigenous technology at agriculture production. That traditional and indigenous technology is not able to produce much food (FAO, 2019).

Nepal is now facing central challenge for shifting traditional subsistence farming into modern farming and adaptation of traditional technology into modern technology. In such a context, agriculture is the main source of food, income and employment for the majority of population, particularly in rural areas. However, in many low-income countries, farmers are constrained with access to various resources in order to adopt new technologies resulting from high transaction costs and price volatility (Pasa, 2017), as well as facing challenging food deficit, malnutrition, population growth, migration, unemployment, inequality and poverty (FAO, 2011). The empirical finding also claimed that the relationship between the adoption of new technology and poverty reduction has been perceived to be positive (Bellon et. al, 2006). There are varies factors affecting farmer to use new technology. Illiteracy, financial support, awareness, availability are some key factors among them (Pasa, 2017).

The utilization of new technology depends on accessibility and availability of resources and production factors (Pasa, 2017). Similarly; but the empirical study of Technological Intervention in Agriculture Development in Lele village stated that regarding impact of the modern technologies, where most of the respondents argued that most of the technologies are geographical ly feasible, socio-culturally acceptable; but not yet economically viable (Pasa, 2017). This argument has specially bias by gender issues of technological intervention and advancement. Because; majority of the rural farmer are still being using organic pesticides against plant or grain diseases and infection for helps to eco-friendly agriculture development. as well as they have less access to financial, capabilities of knowledge and skills about agriculture, and they still use traditional/ indigenous agriculture tools and technologies for substances farming due to the lack of various sources of information about the knowledge of modern agriculture technologies and skills for increasing productivity of agriculture farm.

Marketing channel depends upon characteristics of products and distance of markets (Aryal, 1992); and also heavily depend on product categories and target market (Ghimire, Khadka, & Bhattarai, 2011). The perishable agricultural products especially leafy vegetables and fruits have shorter channel compared to storable commodities. Accordingly marketing costs and profit margins also vary because fruits and vegetables are perishable, and have a high incidence of damage especially during transport. Thus, if the degree of freshness diminishes, so does the price of the commodity, low return and high marketing costs (Aryal, 1992). Previous study of Vegetable Gardening and Marketing in Kirtipur Area of Kathmandu shows that the vegetable, produced by farmers in Machchhegaun is supplied to consumers by two methods i.e. direct and non-direct. While vegetables are sold directly to consumers from farmers is called direct channel. About 30 percent of the total vegetable produced by them in Machchhegaun is sold from this channel. When women producers/ vegetable growers are more active in this regard. Women producer are chose heavily select this channel than non-direct but non-direct channel/ method accomplished through shopkeeper, retailers, and wholesaler more than direct method through farm get, on the way and Fut. path (Rai D. B., 2017, pp. 33-34).

Similarly; various empirical study stated that the technologies are geographically feasible, socio-culturally acceptable; but not yet economically viable (Pasa, 2017); also the Gender Responsive Farming Practices tools and technology are less intervention and lack of availability to the rural women farmers, and women are less access to resource control and decision power, poor knowledge and education (FAO, 2011). In traditional societies labor source based farming system is the main determinants of the sexual division of labor; there mainly three farming system by primary labor source i.e. female, male and mixed (Huntington, 1975). Women work in wedding, transporting agriculture raw product and organic feces, use and make of organics pesticide, crop cultivation and purifying, cutting grass and hay, soil preparation, caring crop and product up to store, product collection, irrigation, and market seals of the surplus product etc.

Sexual division of labor in agriculture by Michael & Douglas, 1984 has test a theory of the processes of agricultural intensification that explains a high proportion of the variance in female contributions to agriculture. The study has

stated the five variables; are number of dry months, importance of domesticated animals to subsistence, use of the plow, crop type, and population density (Michael & Douglas, 1984). In the field of gender roles in agriculture; recent research provide link between female substance contribution and important custom as polygamy (Michael & Douglas, 1984), female initiations (Brown, 1963), gender socialization process and practices (Acharya, 2017), and female control over the economics and other farms resources (FAO, 2011). An earlier analysis of Murdock's 1937 gives strong correlation between the use of cattle in farming and the participation of men in agriculture practices. But the latter discussion has being not offer the relationship between the role of domesticated animals and the plow in agriculture; in terms of specific social process (Michael & Douglas, 1984).

In the rural areas the sexual division of labor may response adaptation of plow or irrigation or baths as a process that increase yield per hector with three major components of agriculture nitrification i.e. labor, capital and technology. As well as women playing responsibilities of triple role on the basis of their cross-cultural model; Furthermore, over 90% of households in the Mid-Western Mountains, women or girls are responsible for collecting drinking water, and 30% of these women or girls have to walk more than 30 minutes daily to do so (UNFCO, 2013). So that the cross-culture process of gender socialization helps to decreasing female participation in agriculture development in rural areas.

In sociology; the idea of incorporating gender issues has to by Marx, Angeal, Semal, WI Thomos take pioneer. Jurg Patter Murdok conclude his finding; when we do change the role of women that gives from society, there might be take negative effect on society, as well as empathized on biological division of labor. But other pioneer of the feminist moment Anna Oakley critique on labor division system on the basis of sex, she's stated that about as 'the product of socio culture value". Because; she argued that the system is narrow explanation of labor division. And poor significant of this system in society, similarly she complain to sociologist for not concentrated of this views. Sheri Ortner pointed out to weak women position offer the cause of his Socio-culture background (Acharya, 2017).

### **2.3.2. Women's Decision-making Power, Voice and Political Representation**

Globally, women only held 39 percent of the workforce but only 27 percent of managerial positions in 2018, and similarly, only 13 per cent of agricultural land holders by women's, and 24 percent of women are national parliamentarian's representatives (UN, 1979). The full and equal political participation of women is a prerequisite for democratic governance (WD, 2019). However, globally, girls and women continue to be marginalized from the political sphere due to restrictive laws and institutional barriers, discriminatory cultural practices, and disproportionately low access to quality education, healthcare, and no or less access to control over the resources (GOOD, 2019), as well as agriculture intensification (Bosrup's, 1956), cross-culture model of gender socialization process (Brown, 1963), biological behavior of the society from at born or external environment (Bhattraï & GC, 2019).

It is possible to reversing discriminatory policies and practices must be done throughout the adopted frameworks for women's human rights, including the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), Beijing Declaration and Platform for Action, 2030 Agenda and its Sustainable Development Goals, and UN Security Council Resolutions 1325 and 1820 and other national/international legal framework and constitutional provision for gender responsive equitable development (UN Women , 2019).

The Election Act, 2007 of Nepal stipulated a 33 percent quota of women's representation in the constitution Assembly (CA) and also on Constitution of Nepal Article 84 (8). As a result, the proportion of women increased up to 32.5 percent of the Constituent Assembly (CA) in 2008 (CARE, 2015). Although this declined to 29.5 percent in the second CA, it is still the highest percentage among South Asian nations (FAO, 2019); about the cause of invisible in an over whelming crowd of men candidates, very few number of elected women candidates, unequal distribution of women candidates from geographical regions, not profoundly positive role of Nepalese political parties to increase women's candidacy, first-past-the-post (FPTP) electoral system is not more favorable for women candidates and non-inclusive nature election (Shrestha, 2018).In Nepal Almost five (5) Constitutional Assembly (CA) election done by the Government of Nepal. The first three elections were non-inclusive nature as the women

candidacy. But the latter two elections, CA election in 2008 and 2013 were more inclusive.

However; the first local-level elections took place in 1997 following the advent of democracy in 1990. Although the Local Governance Act introduced in 1997 mandated only one woman to represent the ward, Village Development Committee (VDC) and district-level Committees and Councils, it brought more than 39 000 women into local political bodies in 1997 (FAO, 2019). These women were grassroots-level committee members responsible for mobilizing VDC funding. They promoted citizenship certificates, and the registration of births, deaths and marriages in their local areas. Women, as representatives, were also active in mediation of gender and social disputes related to domestic violence against women, polygamy and witchcraft, and in campaigns against alcoholism, drugs and child trafficking (GOOD, 2019; Shrestha, 2018). In 2002 local level election is not taking due to the political instability. And similarly; the 2017 local elections were held after in almost two decades, have resulted in 40 percent of women representation in local government (UNDP, 2018). Where; 44.35 percent women are elected from total 41317 representative parliaments in 2017 election as the result of constitutional and legal provision of gender friendly inclusive principle.

The Election Commission Act, 2 073 Article no. 42 provides the provision of adoption of gender friendly and inclusive principles (ECoN, 2016). Often hailed as a historic moment for women's political inclusion, those electoral outcomes were largely facilitated by legislated gender quotas that mandates 40 percent female representation at ward membership level and ensures at least one female candidacy for either mayor/chief or deputy mayor/chief position at municipality/rural municipality level (ECoN, 2016). Similarly the election result shows that although Dalit women's representation is highest at 47 percent, due to Dalit ward member quotas, but they are not achieve to presence in deputy mayor position; and only 2 percent women are represents on mayor/chief and ward chair; which has 91 percent female cover from Khas-Arya. This record challenged to remind in key decision-making position as 48 percent mayors, 44 percent chairperson and also 44 percent ward chairperson constituting only 16 percent of total population (UNDP, 2018).

The status of women's on the basis of gender indices content 13 percent principle teachers from 34.6 percent of total female teacher's population. similarly; 24.65 percent civil service, 3.57 percent judge, 5 percent Advocate, 33% member of the Constituent Assembly (dissolved), 37.29 percent member of the National Assembly, 76.33 percent member of representatives assembly (proportional) and 3.37 percent member of representatives assembly (the first to be elected, 78.18 percent member of provincial assembly (proportional) and 5.15 percent member of the province assembly (the first election), 43.31 percent women representative on District Coordinating Committee, 69.58 percent women represented on Local executive, 40.96 percent in level level. The 70 percent women have Ownership of property. As well as women participation in Representation to Forestry Committee, house- head family, Owned house and house with only real estate or real estate family are 70%, 74.3% and 80.3% respectively (CBS, 2014).

Hence we conclude that the women participation were reformative increasing due to political inclusion in the 2017 local elections; but a *recherché* finding shows that the decision making rights is still orient on the minority group men's than majority group of women's. Because; the financial resources and family support are key factors to chive women's political participation. In the context of rural areas most of the women were spending their time on unpaid family work and there societal thought for women's is different as provider, producer, house wife, care taker of the child, as machine of the home etc. Furthermore, Nepalese rural women are vulnerable to gender-based violence in both the domestic and public sphere, including exposure to wife battering, physical and sexual violence, sexual exploitation (UN Women , 2019), no or less access to family property, low wage payment, force to non-paid job (Huntington, 1975), exploit to decision for reproductive work and harmful practices such as child or forced marriages (UN Women , 2019), *Chaupadi* etc. (Mitchell, 2011).

According to the NDHS (2012) 22 percent rural women are slightly more likely to experience gender-based violence compared to urban 19 percent women's (FAO, 2019). It mean's rural patriarchal system has been still influencing to women's power, relation and political representatives. To

conclude, there is no doubt to improve women's power, relation and political representatives in mainstreaming development process. But simultaneous interventions should be focus on creating wider socio-economic opportunities for women, addressing unequal gender division of labor both within and outside household arrangements, deconstructing internalized stereotypes and challenging paternalistic and undemocratic institutions including political parties through inclusive and gender equalities principle.

#### **2.4. Policy Review**

Nepal has been party to various international treaties and agreements aimed at strengthening the status of both gender in society, and have adopted a number of policies and plans of action in this connection. Particularly with the advent of democracy, Nepal has amended a number of discriminatory legal acts and enacted gender parity laws. However, challenges and obstacles remain in putting these laws into practice. Numerous civil society organizations have recognized that, owing to the prevalence of patriarchal mind-sets in Nepali society, efforts to advance gender equality are often limited to policy papers (FAO, 2019). In addition, large numbers of women and girls, particularly in rural areas, remain unaware of the laws that exist to protect their rights. Nepal also suffers from several capacity constraints. It is recognized that the national women's machinery<sup>13</sup> needs to be strengthened (UN Women, 2014a). This policy brief examines various proven solutions to addressing barriers in institutions, socio-cultural norms, and individual capacity in order to empower all girls and women and amplify their voices in decision-making processes into the mainstreaming process.

In the case of agriculture, for the first time the constitution upholds the rights of farmers to access land for agricultural purposes, and to select and preserve traditionally adopted endemic seeds and agricultural species (part-3, article.42.d). And the new constitution promotes state policies for agricultural lands reforms and discourages absentee land ownership, however, women's ownership of land is still constrained (UN Women, 2015). Furthermore, the new constitution were underpins as progressive foundation for a gender-equitable society, that despite to regard the reorganization of socio-culture, political and economic participation, property rights, right to equal wage ( Article-18.4), access



to resource control and land ownership (article-42,d), the right to special opportunity in the sphere of education, health, employment and social security (Article-38.e), Citizenship right to women's(Article-12), right to participation(Article -38.d), right to safe motherhood and reproductive health (Article -38, b), right to freedom (article-17), Political realm / participation, Equal rights of both spouses in property and family affairs (Article -38.f, ), and rights to access of agro inputs. (GoN\_CAS, 2015).

Similarly ,the Gender Equality Act 2006, and subsequent amendment of 56 discriminatory laws against women; Amendment of Civil Service Act 1993 in 2007 to promote gender and social inclusion; reservation of 20 percent of places for women in the Nepalese Army in 2011, and Nepalese police and armed police in 2007; the Human Trafficking and Transportation (Control) Act 2007; The National Women's Commission Act 2007; The Election Act (2007) provided substantive quota for women (33 percent) to be represented in CA; The adoption of the Gender-Responsive Budget (GRB) to ensure adequate allocation of resources for gender equality and women's empowerment in 2007 and 2008; The Domestic Violence (Crime and Punishment) Act 2009; National Action Plan on Women, Peace and Security in 2011. Nepal became the first country in Asia to ensure that women's and girls' rights are protected in the Comprehensive Peace Accord (UN Women et al., 2016b); Five-year National Strategy and Action Plan on Gender Empowerment and Ending Gender-Based Violence (2013-2017); Sexual Harassment at Workplace (Protection) Act (2014); National Action Plan on Foreign Employment 2015; Witchcraft-related Accusation (Crime and Punishment) Act (2015) and amendment of some Nepal acts relating to gender equality and ending gender violence, which amended the 32 discriminatory acts including the Domestic Violence (Crime and Punishment Act) in 2015.

The section will present the overall agriculture development policies, acts, and other adopted international targeted agreements and agenda for gender equality in participation and economic empowerment of both gender with dividing several sub-section. The first section will focus on what legal practice are implementing to strength gender equalities in agriculture development with Women's decision-making power, voice and political representation in policy level assessment. Second; gender in agriculture and rural development policy and

strategy focus, third is gender concern in National plan and program for agriculture development and fourth will specially present international commitments and legal provision for gender equality promotion and agriculture development.

#### **2.4.1. Gender in Agriculture and Rural Development Policy and Strategy**

Government of Nepal (GoN) has been operating, Gender and Agriculture related Rural Development (RD) policies under the Constitution of Nepal (Article no. 51.e & j) emphasize agriculture development with social justice and inclusion; protecting and promoting rights of patient and utilizing the scientific land reform policy for increasing production and productive of agriculture and commercialized, differentiation and industrialized of agriculture through by making arrangements for agricultural tools and an access to market with appropriate price for the produce (GoN\_CAS, 2015). Gender friendly Gender mainstreaming concern in agriculture development policy, plan, program and strategy of RD is vital, not only for achieving equality but also for the socio-economic development of the rural Nepal (FAO, 2019).

Government of Nepal adapts the Gender Equality and Social Inclusion (GESI) mechanism for to enhance contribution of agriculture into the poverty and vulnerability reduction taking up the CEDAW recommendation. Agriculture Development Strategies (2015-2035) ADS approved by MoAD in 2015 for overall development of the agriculture sectors. It is 20 years long term plan of action to achieve food sufficiency, sustainability, competitiveness, and inclusion with interrogation of GESI mechanism through ADS process in agriculture development program. Gender highlights on agriculture and rural development policy and strategy has been address food and nutrition security of the most advantage rural population including lactating and pregnant women, indigenous and excluded committees.

The strategies emphasis to establishment of comprehensive set of mechanism of gender equality and social inclusion (MoAD, 2016). Similarly, the strategy recognized female as independent farmer and insure adequate budget provision for carrying out activities towards women empowerment including access to total factor productivity (TFP requires not only land, labor and capital,

but also such things as technology, innovation, efficiency, human resource capacity, and governance) and women leadership in decision process (FAO, 2019). The ADS has targets 50 percent farm land own by women or both gender from 10 percent in 2010. Similarly, equal wage for woman in agriculture; enhance equal participation of both male and female in agriculture development and GESI friendly agriculture research and program expansion (MoAD, 2016).

The seed sectors development strategy has adopting a comprehensive GESI approach in agriculture towards increasing efficiencies along the entire value chain from seed production through processing to marketing and use, in order to increase productivity and align profit margins to chain actors for protecting women and disadvantaged groups. The strategy emphasized equal right and access to information, skills and services on seed use irrespective gender, cast and ethnicity across geographical region (MoAD, 2013).

National Agriculture Policy, 2004 has highlights the gender issues with emphasized; 50 percent participation of women in every possible agricultural activity for gender equality, conduct mobile training in micro level to women for access to information, identify small agriculture farmers (who own less than 4 ha. of land), Provision of particular programs to targeted groups for poor land holder or small agriculture farmer, and deprived groups (Dalit and Janajati) in development of commercial and competitive agricultural systems, and enhances management capacity of women in women's cooperatives and women in farmers' groups to achieve the targeted goals of sustainable agricultural development for transforming subsistence oriented farming system into a commercial and competitive farming system (MoAD, 2013).

Further, Agribusiness Promotion Policy, 2007 ensure special programs for the poor, women and Dalits for establishing agricultural entrepreneurs. and Agro-biodiversity Policy (2007)(first revision, 2014), focus to organizes special programs for the poor, women and Dalits for the establishment and development of agro-enterprises with explores, promotes and utilizes indigenous knowledge in agriculture (MoAD, 2013). Similarly, Gender Mainstreaming Strategy (GMS), 2006 has commits to achieve 50/50 women-men participation in all administrative mechanisms and all aspects of development with focus to increase women's skills

in commercial agriculture, women's economic empowerment, and institutionalization of gender issues at all levels focusing on women's participation in commercial agriculture (MoAC & ADB, 2006).

AMPP, 2014 attract youth and women agriculture producers in mechanized agriculture and increase their agriculture productivity with Sustainable and competitive produce for sustainable economic development of Nation with modernization. The policy aims to focus on promotes adoption of women and environment-friendly (gender friendly) technologies and machines for to reduce the workloads and harmful work of woman's through agricultural mechanization (MoAD, 2014)

Irrigation Policy (2014) and water Induced Disaster Management Policy (2016) emphasizes 33 percent of disadvantaged people engaged in water users and Water associations; Encourages participation of backward and disadvantaged groups in users group for management. Similarly , the Climate Change Policy (2011) Ensures the participation of poor people, Dalits, marginalized indigenous communities, women, children and youth in the implementation of climate adaptation and climate change-related programs; Provides capacity building for local bodies and ensures the implementation of local-level activities.

Nepal has taken responsibilities for the achievement of Sustainable Development Goals (SDGs) with set targeted 2030 agenda of sustainable development. However the rural development policy programs and strategies need reviewing in the context of SDG-5 on gender equalities. Because gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, harmony, prosperous, social integration and sustainable development (United Nation [UN], 2015).

The government aims to address not only stands goals, but also the mainstreaming to all the other SDGs with gender empowerment and social inclusive strategies of targeted indicators. Goals because attainment of one goals could be contingent to another goals. Hence, gender equality (SDG-5) is a central key of rural development program, policy and strategy to construct sustainable gender responsive agriculture development. When the majority of rural population are involving in agriculture activities to serve their life and sustainable economic

development of the Nation. If when, the farmers are not feel free from gender inequalities, there may create conflict, crime, violence, inequalities, poverty and unemployment. So that, the government recognized the importance of transparency and good governance at all levels, which helps to create access and justice to agriculture farmers' and also need to formulate gender-sensitive policies in agriculture development (FAO, 2019).

The Ministry of Land, Agriculture and Cooperatives Management of the Karnali province has unveiled a scheme to implement of "One local level one model farm" and "one cooperative- one model agriculture, livestock and fisheries farm" principal will be adopted with a slogan of "Increased organic farming increased prosperous karnali" as main motto for agriculture development with to implement One District-Two Agriculture Pocket Areas Programme in all 10 districts of the province, which has also envisaged operating various schemes for effective marketing of the agriculture produce in Karnali province (DVN, 2018). Similarly, the Karnali Provincial Government was being implementing the policy for agriculture transformation to prosperous karnali with sustainable and inclusive economics development and social justice.

#### **2.4.2. Gender Concerns in National Agriculture Plan and Program**

The concern of women's participation in economics development has begun prior from the past two decades. Because, Nepal's policy on women in its development endeavor was initiated in its first Five-Year Plan (1956-1961) with a 'welfare approach' that focused on women's reproductive role (FAO, 2019). The first five year plan has been initiated modern agriculture development in country economic development. At that time around, 95 percent of the population was involved in agriculture. In the plan were top prior to transportation and communications with over 36 percent budget allocation and agriculture including irrigation, received second priority with about 20 percent of budget expenditures (Chaudhari, 2018). Then after various efforts are being made in relation to gender and agriculture development but industrialization was given the first priority.

The gender issues are being prior to reduce inequalities in development process Since from fifth plan (1975-1980) has realized the integration of gender concern in agriculture; when the women's development activities were included in

the education, health, employment, agriculture, cooperatives, law and forest sectors. In the same time, The United Nations (UN) declare the period 1975-1985 as the Decade of Women, which coincided with Nepal sixth Five-Year Plan (1980-1985), the effort has helps to shift an "efficiency approach" and also it recognized the "productive role of women" for the first time in Nepal. Therefore; the sixth plan is a *golden time for women development*, when the plan realized the women participation of development plan formulation processes and also focuses various agriculture programs to the women's farmer. Similarly, the seventh Five-Year Plan (1985-1990) focus women's participation was enhanced with adopting the policy of fixed quotas, such as a target of 10 percent of women participating in training programs (MoAC & ADB, 2006) with combined an equal participatory approach with efficiency approach (FAO, 2019). The eighth plan (1992-1997) was in push the provision for enhancing women's access to agricultural inputs, Institutionalization of women's contribution to agricultural activities and ensuring women's participation at the policy level (MoAC & ADB, 2006). However, more concerns were raised after the restoration of democracy in 1990, and the plan was decided to mainstream women's development (FAO, 2019).

Three strategic approaches were emphasized in ninth fifth-year plan (1997-2002): including women's empowerment, gender equality and gender mainstreaming in all development activities in agriculture. During The plan period, a paradigm shift occurred from Women in Development (WID) to Gender and Development (GAD) in Nepal's development policy as par the historical change of the gender development. Likewise, the tenth five year plan (2002-2007) emphasis on mainstreaming gender in agriculture extension services and working towards women's capacity development and professional enhancement.

Provision of joint ownership certificate in land (name of both husband and wife) and provision of 20 percent discount on the registration charge whenever land is purchased in the name of a female member of the household were mention in Eleventh Plan (2007-2010). As well, the Twelfth Plan (2010-2013) were focused on development and use of small and appropriate agricultural tools for to reduce women's workload, save labor and add value to agriculture produce. As a result, the plan were strengthened the role of women for sustainable peace and development by building their capacity in social, economic and political areas.

The Thirteenth three years plan (2013-2016) were organized women's into groups in order to enhance their access to agricultural land, technologies and tools. The plan was focused to promote alternative energy & technology to reduce women's workload in firewood collection. The provision of subsidized loans, credit for entrepreneurship development and expansion of the labor and time saving technology for women were initiated in fourteenth three years plan (2016-2019). As well, the plan was emphasis to ensuring quality promotion and market access for products produced by women's groups (FAO, 2019)

Government of Nepal (GoN) has been implementing fifteenth five years plan (2019-2023) in 2019. The plan aims to achieve inclusive and sustainable economic growth and build agriculture based welfare economies of the nation by the mechanism of agriculture transformation. Specially, the plan prior to "gender equalities" with equal and meaningful participation of women's for economic welfare and sustainable development. The plan is emphasized on increase agriculture production and productivity, integration of education, capacity development of the farmers, improve quality of produce, Agro-insurance, credit and lone for entrepreneurship development, commercialization, industrialization and competitive quality development. As well, the plan also focus to policy faceplate to private investment in agriculture, agriculture infrastructure i.e. collection center, store house, transportation road, technologies etc. and technical, commercial and organizational capacity building for to make profit of production. (NPC, 2019)

However, the Government of Nepal (GoN) was formulated long-term and national periodic plans for agriculture development with gender focus. Accordingly, Agriculture Perspective Plan (1995-2015) was implemented by Nepalese Government with initiatives of NPC, ADB, APROSC, JMC and other cooperate agency WB and FOA. The plan aimed to accelerating agriculture growth through increased factor of productivity by improving the living conditions of women as one of the five dominant objectives in addition to alleviate poverty, transform the subsistence -based agriculture into a commercial, expand/ enhancing opportunity for to the farmer for an overall economic transformation by fulfilling the precondition of agriculture development, and

identify various strategies of implementation from gender prospective (Basnet, 1999; FAO, 2019).

The plan lacked effective gender mainstreaming mechanism and gender relation in onset. In addition, there was no mention of the importance of gender sensitivity in the implementing machinery, rules and regulations (FAO, 2019) Hence we argue that, the plan was only target to beneficiaries with focus on addressing their practical needs. The APP focus on women's in a very limited way. As a result, could not improve income of women's and small farmers in rural areas.

ASDP has been implementing by Provincial government of Karnali in 2018 with a goals of the program are to contribute the reduction of poverty and nutrition insecurity amongst women and men in hill and mountain areas of Karnali Province under the schedule 4 of new constitution of Nepal, 2015 with partnership of (GoN), IFAD), and HELVETAS are the major partners of the ASDP. And the private sectors farmer's organizations and local NGOs (implementing partner) are also the partners of the programme.

ASDP props to apply the ADS principles of gender equalities and social inclusion (GESI) to the development of the agriculture of rural areas. The program emphasized to improve sustainable income and food security of the smallholder's farmers and disadvantage rural groups in commercially oriented production and marketing systems in selected high value agriculture. Specially, the program has targeted to reduction of poverty and food insecurity in mountain and hill women, by focusing to inclusive and sustainable agriculture value chains, market-oriented infrastructure development, rural financial services for value chain, and agriculture services sustainably support innovation (IFAD, 2017).

#### **2.4.3. International Commitments and Legal Provision for Gender Equality Promotion and Agriculture Development**

Government of Nepal (GoN) has been signed to several treaties and international human rights instruments for to supporting women's rights and equality in mainstreaming development process. Accordingly; Nepal has ratified the Elimination of All Forms of Discrimination against Women (CEDAW), on April 22, 1991, and also ratified too ICCPR and ICSCR on 14, May-1991 as an



international bill of human rights of women's (UN, 1979). These instruments were elaborates further the civil and political rights and freedoms listed in the Universal Declaration of Human Rights to promote the right to self-determination and to respect that right (UNHR, 1966). It also recognizes the rights of peoples to freely own, trade and dispose of their natural wealth and resources.

However, Beijing Declaration and Platform for Action (BPFA) 1995, is an "Action for Equality, Development and Pace" (Acharya, 2017) of women's from the earlier realization to the gender concern; Plan of Action (1975), Program of Action (1980) and Nairobi Forward-looking Strategies (1985) for the advancement of women's by removing all the obstacle to women activities. The declaration were emphasis broad based sustainable economic growth and social justice with recognized women's share of common concern (13 critical areas of concern) that can be only addressed by working together and, in partnership with the man towards common goals of gender, including the principle of equality for all people of all age and from all work of life and to this end for action flagged 12 key areas where urgent action was needed to ensure greater equality and opportunities for women and men, girls and boys. It also laid out concrete ways for countries to bring about change (UN Women, 1995; Acharya, 2017). As well, the MDGs set out targets for gender equality, women's empowerment, poverty reduction, universal primary education, and maternal health in 2000 by 2015 (FAO, 2019).

Similarly, The Government of Nepal (GoN) has party on various international instrument about rights of women's and gender equality; like convention on equal wage (1951), convention on voting right for women's (1951), The Convention on Women's Citizenship (1957), Convention on the Elimination of Professional Discrimination (1960), Convention on Marriage (1962), Convention on the Elimination of All Forms of Discrimination Against Women (1979), Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others (1994), United Nations Convention on the Elimination of All Forms of Discrimination against Women (1979). These convention helves to protect the several rights of women's including equal wage for same work, secure political rights to women's as representative and voter, violence and discrimination (Acharya, 2017). As result, the women cams into

mainstreaming development process, but most of the women still under facing problems about unequal wage, no or lack of access to political powers, domestic violence, discrimination, child and force marriage in developing nation (Acharya, 2017).

The ILO Convention 169 ratified in 2007, that marked a significant development in land reform, land ownership and natural resource management, and committed the country to the rights of indigenous peoples (ADB, 2012). Optional Protocol to the Convention to Prevent, Suppress and Punish Trafficking in Persons, specifically Women and Children acceded in 2008. As well, Nepal made gender-sensitive health policies and programs for sustainable development from subsequent to ICPD (1994), ICPD+10 and ICPD beyond 2014 by adapted the Programs of Action. United Nations Security Council Resolutions 1325 and 1820 established legal standards to ensure the meaningful participation of women in the peace process (FAO, 2019). The SDGs were adopted on 25 September 2015 as part of the 2030 Agenda for Sustainable Development, and Nepal initiated the implementation of the set targets for the achievements of the SDGs (NPC, 2017).

## **2.5. Knowledge Gap**

Gender is a major issue in development. It does not only reflect the issues of women in development. In present gender issues only reflect to women's because of patriarchal practices, behavior and think, however the situation response to sad of women development. Government has taken initiatives in constitutional legal policy, plan and program with Gender Equality and Social Inclusion (GESI) principle to address issues of gender inequalities in development by the recommendation of international entities and commitment likes CEDAW, BPFA and MDGs to SDGs. Accordingly the constitution of Nepal, 2015 promotes state policy for land reform and discourages absentee land ownership by both gender. The Successive governments have said that agriculture deserves a special priority and pledged to modernize and commercialize the agricultural sector for the overall development of the country. As well as, government has targets the inclusive and sustainable agriculture based welfare economic of the nation.

Specially, agriculture based rural development policy, program and project has being focusing to sustaining agriculture activities of small scale farmers by the

mechanism of social inclusion, equality, empowerment, poverty reduction and capacity building of women's in development process for secure quality life of rural women's farmers. But practically the situation does not seem to have changed favorably. Wherever 58.3 percentage women's populating of rural areas are still engaged in this farming system from total 73.6 percentage of agriculture population in Nepal. Basically, Hill and Terai region increased fragmentation of agriculture land and also in Hill and Mountain seems the problems of agriculture land abandonment due to the cause of the problems of human resource scarcity in agriculture, particularly so in the hills as the youths doesn't seem to be attracted to farming in their pursuit for better opportunities to abroad.

From GRFP prospective the government subsidies policy provision of improved seeds, fertilizers and irrigation facility are always in short supply and often it's a big hassle to get hold of them. And irrigation facility is far from adequate, constitutently; the rest of irrigation is depends on monsoon. The farmer's are facing problems of product damage due to lack of agro-inputs, poor marketing infrastructure i.e. storage, collection center, processing center, linkage, etc. in the study areas. Women workload and wage rate inequality problems in agriculture is another challenging problems of GRFP due to the lack awareness about the application of technology adaptation and lack of gender friendly technology. And farmers have not access to agriculture credits or financing service for modernizing. Similarly, employment inequalities, including the gendered division of labor, rural women's triple-work burden and gender wage gap, represent additional obstacles for economic empowerment of women in gender mainstreaming process.

Hence, we conclude that the gap between concept, theories, policy and practical of gender-responsive agriculture development are; inequalities on participation, employment, wage and ownership, access to and control over resources, work based gender division of labor, government subsidies and scheme benefit between small marginalized and reach farm, land use planning, labor scarcity, technology apply and adaptation, marketing platform, agriculture inputs & infrastructure, and urban based research is exist unequal distributed. Therefore, this study will be looks promising to identify the role, status and agriculture development practices with their problems and prospects of the tag with the main objective of to explore modernizing trend of gender-responsive agriculture development.

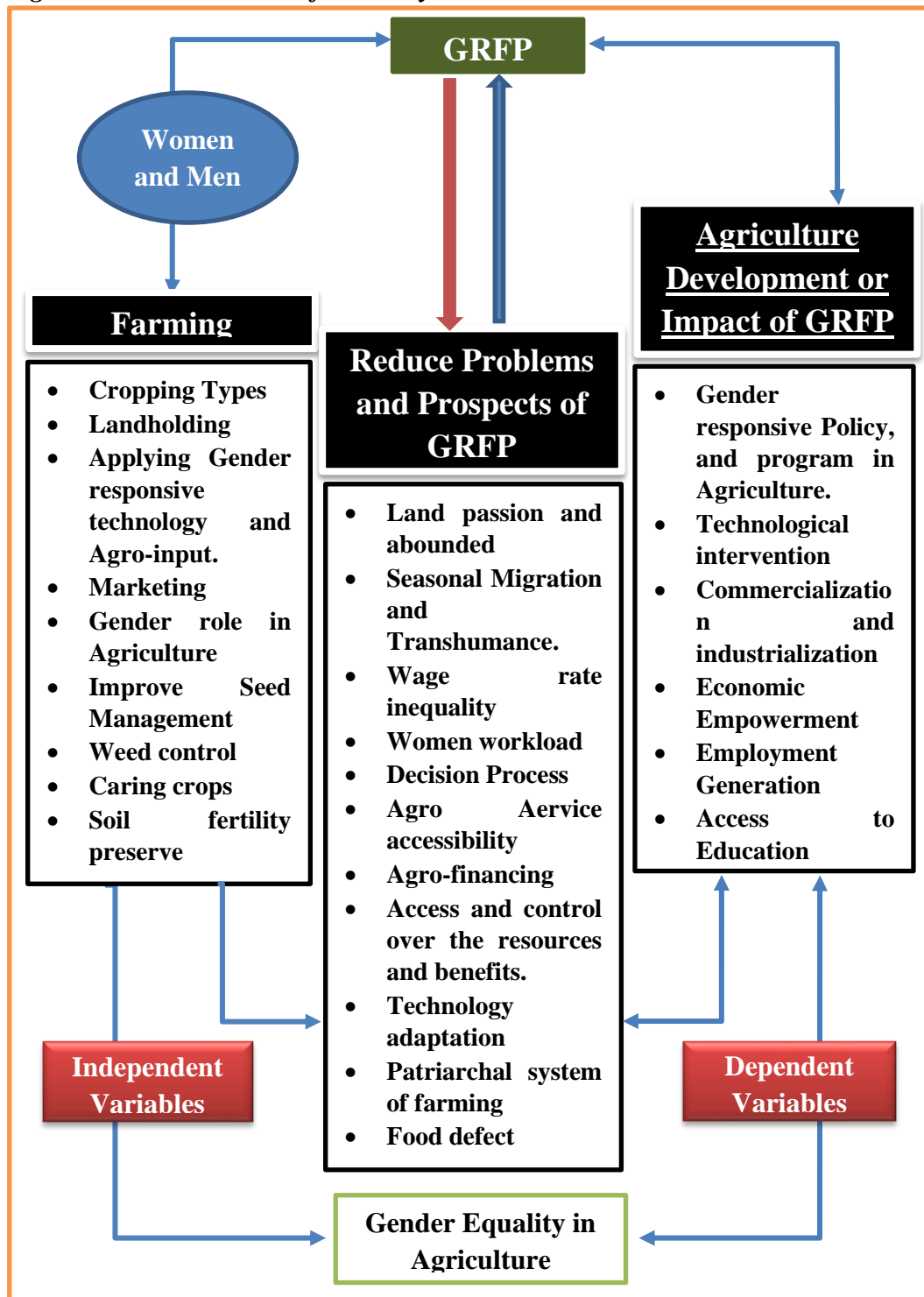
## 2.6. Conceptual Framework of the Study

The following conceptual model represents the key elements that shape process of the Gender Responsive Farming Practices (GRFP), which has make the study easier in the interpretation of the findings for the case of Soru Rural Municipality, 8, Mugu. The conceptual framework of this study is given below (*see figure 2.2.*)

Figure 2.2, shows existing GRFP related problems and prospects in the study area. In this areas Gender equality in agriculture is most of the challenges of GRFP. Within the practices women has face more problems than men, such problems likes; wage rate inequalities, workload, decisioning for farming, agro input, financing, technology adapation, , belief, accesss and control over the resources and benefits etc. Priarterchial system of farming and literacy level is another problems of GRFP in the study areas. Therefore, the concept of GRFP study has focus to examine the gender role of women in farming. What prospects and problems of GRFP are facing in the study areas farmers to adept changing practices of agriculture development, So this figure shows that, how GRFP reduce gender inequality in agriculture.

The figure 2.2 shows that the equal participation of women and men in agriculture activity such as cropping, weeding, landholding, technology operation, marketing, soil preparation, weed control, soil fertility preserve, seed selection, product collection, processing and storage can help to reduce problems of GRFP and the level of reducing GRFP problems helps to agriculture development. Similarly, agriculture development or impact of GRFP has best way of reducing the problems and prospects of agriculture development through gender responsive farming practices in the study areas.

Figure 2. 2: Framework of the study.



Own Presentation, 2021

Absolute goal of GRFP is to promote gender equality in agriculture through gender responsive policy, technological intervention by equal participation of male and female in agriculture activities. Therefore, the study has examined by this framework through the assumption of what GRFP practicing with policy. And how its impacts to small scale farmer's socio-economic status service accessibility as GRFP in the study areas.

## **CHAPTER III RESEARCH METHODOLOGY**

This chapter put up an attempt to the methodological aspect of study design by considering the descriptive research paradigm within which I locate my research. The study has linked to exploratory survey with the ontological and epistemological positioning of the study basis for in-depth survey. The study has purposed to explore the modernizing trend of agriculture development in rural areas from gender prospective, so that the study has emphasized gender sensitive-responsive paganism of social science research as well as the challenge of avoiding imperial agendas and traditional dichotomies. This chapter aims to explain the particularity of the methodology of this study. It is hoped that the chapter will reveal something of the need to ‘discover a methodology for ourselves’ as well as why the choices I made were not just appropriate, but necessary (Clough, 2004 also cited on (Mitchell, 2011)). However, the methodology of this research is not covered entirely in this chapter alone but is found throughout the entire thesis; the boundaries between sections are frequently blurred, and content and form are often inseparable.

### **3.1. Research Design**

A research design is a clear planned procedure for carrying out the research activities for to achieve objectives of the study. The research design generally incorporates answer to find what short of data need to collect in order to test relationship, hypothesis testing, and descriptive for interpreting finding of the study. Similarly, where we collect data? How we collect? And various tools and technique for data collection and analysis on clearly. This study will offered descriptive research design with exploratory-survey study design. It uses exploratory research design to explore the gender responsive agriculture modernization trend of agriculture development and descriptive research use to describe gender role and status in agriculture development by systematic operation searching for adequate information.

### 3.2. Geographical Description

Geographically Mugu district is situated between 22° 46' to 29° 56' north latitude and 81° 4' to 82° 49' east *Figure 3.1: Geographical Map of Study Area.*

longitude (NPC & CBS, 2019), along with ecological division of Hill, Mountain and Mountain valley. The district covered Dolpa of east pole and Bajura in as well Humla/ china and Bajura and Jumla lie on north and south similarly. Mugu district is reach



diversity of natural resources, environment, culture, cast, religious and occupation. According to census (2011) there is total 55268 populations, where 49.3 percent female and 50.7 percent are male. The majority of people (91%) are Hindu, 8.08 % Buddhist, 0.20% Christian and 0.01% Islam. The most common languages in Mugu are Khas-Nepali (about two- thirds of people have it as their mother tongue), Sherpa, and Tamang. However, the caste and ethnic composition was 61% Chhetri (61%), Dalit (12%), Sherpa (7%), Brahmin (5%) and smaller shares of other groups (CBS, 2014). The Hindu religion (91.64%) is high composition than other like Buddhist (8.08%), Kristian (0.2%), islam (0.01%) and Prakarti, kiratio and Other cover 3, 1 and 31 person respectively (CBS, 2014). The districts is reach bearable climate variation for organic-agro production i.e. wheat, paddy, Kagauno, Phapar, Mas, and other cash and permanent crops; which has more fertile soil, temperature and other natural environment resources.

### 3.3. Selection of the Study Area

This study has select the Soru Rural Municipality ward no. 8 of Mugu district (see in Appendix IV). The area covered 11.309 Percentage (365.8 Sq.Km.) of Mug district (CBS, 2019). According to census (2011) the Municipality has population total 12258 people living in 2109 individual household. Purposively the study has select ward no. 8. It has altogether five (5) clustered villages in different locations within the Rara VDC and the clustered village names are Nuwakot, Ruma, Kachhe, Asidhara and new expend place Tarapani. As per the new federal government system, assembled preceding wards 1-7 were

incorporated to Soru Gaunpalika on 10 March 2017, and other two 8-9 (Murma village) were also incorporated in Chhayanath Rara Municipality (Na.Pa.) in the Mugu district.

### **3.4. Nature and Source of Data**

On the basis of research objectives, data has mostly used both qualitative and quantitative in nature. To fulfill the objectives of this study, the main source of data will be primary and somewhere secondary data used.

#### **3.4.1. Primary**

For the primary data, the information was collected from respondent. This includes various aspect of Gender Responsive Farming Practices i.e. what practices are they practices? How is the status of women in society? What roles are they performing in agriculture with compare to men? How problems are they facing in agriculture development? And what prospects are exist in this village for GRFP? The major aim of study is to explore the modernizing trend of GRFP of rural areas in UDCs. Therefore, the primary data will concern to find this research question through primary tools and technique of data collection (*Appendix-I to IV*).

#### **3.4.2. Secondary**

Mainly, this study based on primary source of data through the secondary data also use. These steps may use second hand data collect from different book, journal article, newspaper, national and international publication, thesis and Organizational report etc.

### **3.5. Sampling Procedure**

Sample is the reprehensive unit, items or elements of population, that can take from pre-defining unit of study population by using systematic process, method, and technique with their principle; these method, process and technique are called sampling procedure (Pant, 1975). In sampling process, if the study population and their units' characteristics is heterogeneous nature we should be select large sample size, but there the study population is small with homogenous nature there can be select small sample size (Adhakari, 2014).

From the central limit theorem, Sekoran & Bougie (2013) emphasis that the sampling distribution of the sample means is normally distributed. Irrespective



of whether or not the attributes in the population are normally distributed, if we take large enough sample and chose the sample carefully, we will have sampling distribution of the mean that has normally (Pant, 1975).. Hence, we conclude from the above guidance for the sampling procedure and the basis of population unit characteristics, size and their nature; the study has applied cluster sampling with simple random procedure by using following sampling methods, tools and techniques for to select appropriate size of sample from defining study units of population.

### **3.5.1. Defining Population**

All over the Municipality there are presiding 11 wards; 2109 individual household (HH) and total 12258 population. Purposively, the study has select word no.8. According to census (2011) the ward had 517 female and 564 male populations living in their 176 individual household. The study has define 1082 total population and 167 HH is my study population (NPC & CBS, 2019); because, the study may not be covering the all areas and units of population. The appropriate size of sample population has define on the basis of my study objectives, which is related to GRFP practices. At this time the areas is access to road linkage, new market expending with new administrative structure of government and the women's are take reach initiative for agriculture development by the efforts various local governance. But t there must be account more inequalities between man and women in agriculture.

### **3.5.2. Sample Size**

The study has carried out by both sampling technique. Systematically the sample size has been taken 125 household from 167 total wards HH population by using Krejcie & Morgan (1970) formula on 5% margin of errors. Also the study has use convenience technique carried for to select respondent (especially female) in study area.

### **3.5.3. Determining Sampling Tools and Technique**

The study has used following sampling tools and technique, which are considered to the research objectives.

#### **3.5.3.1. Systematic Sampling**

Systematically the study used Krejcie & Morgan (1970) formula i.e.  $\frac{N}{(1+ne^2)}$  for to determining appropriate sample size of household and then use  $K = \frac{N}{n}$  formula for to identify fixed interval from selected sample size.

### **3.5.3.2. Convenience/Purposive**

The study has follow this technique as another important tools of sampling design. This technique used to find the additional information about my study subject matter with my own desire and subject matter as convenience particularly include key information of the research (*Appendix-III*). As well as this technique has applied on respondent selection.

## **3.6. Data Collection, Tools and Techniques**

The study has followed various types of tools and technique for to accumulating facts finding. The study has determined tools and technique of data collection on the basis of study nature and subject matters (Pant, 1975).. The major tools and techniques of the data and information collation has used as first hand nature tools with additional technique for the fulfillment of the research objectives. This tools and technique are listed below.

### **3.6.1. Questionnaire Survey**

It is a tool of data collection. According to Goode & Hatte, 1952- Questionnaire refers to a device for securing answer to a series of questions by using a form which the respondents fill in him."The tool has mainly Open, closed, and structure and unstructured questionnaire has compilation within the set of survey question in data collection process.

### **3.6.2. Observation**

The observation as a very importance tools, method and technique of information gathering of the present actual situation of the study areas. So that, the study has been followed the study observation guideline (*Appendix II*) for to observe current situation of the study areas. This observation process will related to GRFP components, Socio-economic and demographic components, environment/climate components culture, value, practices and their livelihood from the gender prospective.

### **3.6.3. Key Informant Interview (KII)**

Basically, this tool has developed to use on two levels respondents like (local government/ farmers) by using KII schedule (*Appendix-III*). For the COVID-19 pandemics situation, this tools has only sued on local farmer and other stakeholders.

#### **3.6.4. Focus Group Discussion**

The study has taken 8-10 number of local participant involve in interactive discussion in this study, which related to study subject matters with gender participatory approach. Further the study has conduct on unstructured nature in community level with participatory involvement of the related stakeholder through FDG guideline (*Appendix-IV*).

#### **3.6.5. Check List**

The study has carried out these tools to observe the gender roles, relation and status of gender in agriculture development practices in study areas, which it has helps to find what activities being done by women's and men? What resources access to and who is it control? As well as the study used these tools to find what problems are they facing and what prospects we have? Similarly.

#### **3.7. Data Analysis and Interpretation**

The study has done this stage to checked reliability and validity of the data, variable measure, phenomenon explore, data summarize, relationship test of the variable, compare variable, check association of the variable, study outcome forecast, and hypothesis test by systematic process and Scientifics method, also use reliable or valid technique of the data analysis and interpretation. Basically, the study has used this method, tools and technique for data analysis and interpretation of the finding through pre-determining standards.

#### **3.8. Ethical Consideration**

The study has been pre-concerned for data collection, Privacy mention, clear reciprocity, and trustworthy environment was build rapport to the respondent. Similarly, study has followed prohibition to preservation of the data from misuse, no risk of experimentation, data manipulation and creates the environment of neutrality.

## CHAPTER IV DATA ANALYSIS AND INTERPRETATION

The study explains the Gender Responsive Farming Practices as the means of increasing income, employment and nutrient supply including socio-economic and institutional implication in the rural sphere. This also analyzes the key variable of GRFP practices for to explore their modernizing trends, with the questions of what they were being practices agriculture development for adapting rural livelihood strategies. Furthermore, the study concern to find gender based role, practices and socio-economic impact to farmers, problems and prospect of GRFP in rural areas and attitudes of the urban people with regard to increasing agricultural production, with identification of the organizations involved in supporting to agricultural development activities in soru R/M areas of Mugu district. The major highlights of the study include the following.

### 4.1. General Characteristics of the Respondents

The socioeconomic patterns of the area covered by the study includes demography characteristics, landholding patterns, income and employment patterns which has been outlined, based on the survey, as under.

#### 4.1.1. Demography Characteristics

Demography is the study of human population dynamics. It encompasses the study of the size, structure, and distribution of populations, and how population change over time due to birth, death migration, and aging. The analysis can related to per defined small group such as education, religion or ethnicity of study areas. Must parts of the village are covered by sloppy land and green forest. The study areas is about 1750.00 KM far from Kathmandu (NPC & CBS, 2019). There are fast raising of transportation option (i.e. Bus and Airport) from Karnali highway linking from Nagma to Gamgadhi-Tarapani (Dhaina Dhulachaura) and also linking to Nakchhalagna China getaway as a means of transportation of goods and service from those linkage.

**Table 4. 1: Households Population Composition of Soru R/M, Word no. 8**

Villages.	No. of HH	Total Population		Household head			Average Family Member
		M	F	Total	M	F	
Rara-Asidhara	26	61	77	138	18	8	5.31
Kachhe	37	121	121	242	27	10	5.54
Pallabada-Kachhe	19	61	48	109	11	8	5.74
Ruma	46	204	178	382	28	18	8.3
Ruma-Gylahaa	25	51	47	98	16	9	3.92
Nuwakot (Chintu)	23	66	46	112	14	9	4.87
<b>Total</b>	<b>176</b>	<b>564</b>	<b>517</b>	<b>1082</b>	<b>114</b>	<b>62</b>	<b>5.78</b>

*Source: (NPC & CBS, 2019)*

According to census 2011, the total population of All over the Municipality areas is 12258 of diversity groups' population (NPC & CBS, 2019). 8 no. ward of Soru R/M is more possible words of agriculture activities in Mugu. There are total 178 HH within the whole ward and total population is 1082. Table 4.1. Shows that the population of the male and female is 564 and 564 respectively. The study is purposively located in word no. 8 of 125 HH. Similarly, the average size of family has 5.78 in municipality areas.

**Table 4.2: Sample Population Composition of the Study**

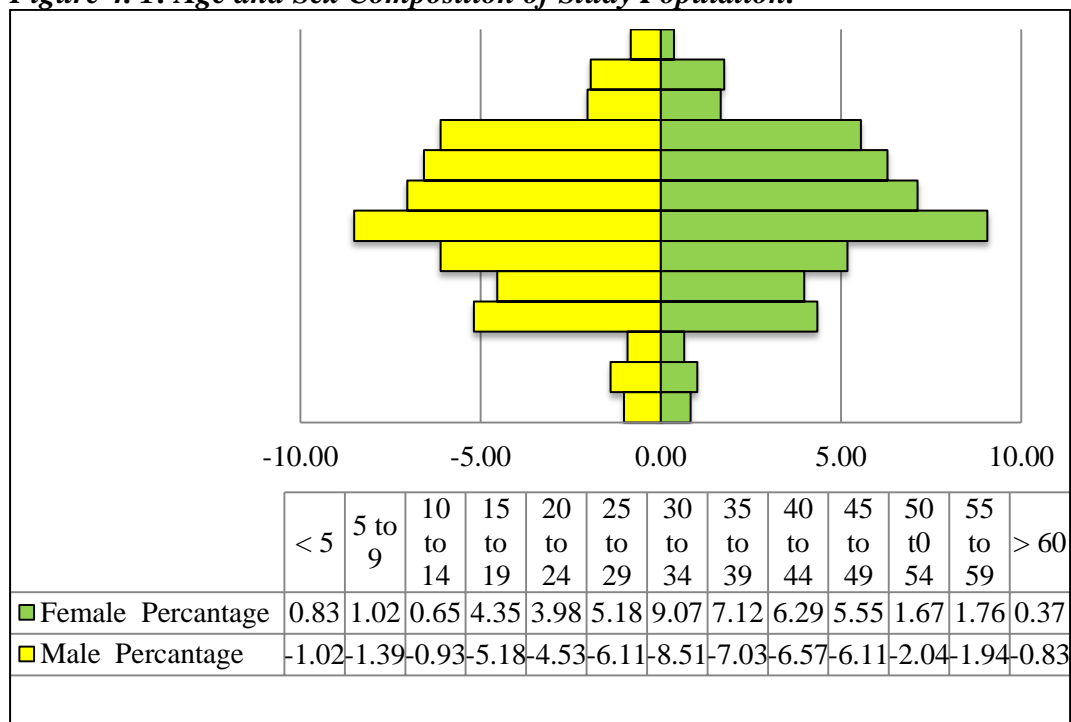
Study Location or Villages.	Total No. of Sample HH	Household head the family member		Total Sample Population		Total No. Family Member	Average Family Size
		Male	Female	Male	Female		
Rara-Asidhara	14	9	5	6	8	95	6.79
Kachhe	20	12	8	8	12	114	5.70
Pallabada-Kachhe	11	9	2	6	5	18	1.64
Ruma	55	26	29	19	36	334	6.07
Ruma-Gylahaa (Tarapani)	15	12	3	9	6	76	5.07
Nuwakot (Chintu)	10	6	4	4	6	39	3.90
Total	125	74	51	52	73	676	5.41

*Source: Field Survey, 2021*

Table 4.2, shows that the ratio of total sample household population and household head with their family size. Majority of the 74 (59.2%) sample has male head of the family and other 51 (39.8%) household head has female. Total 676 family members are reported, and average family size is 5.41 from 125 sample household. The size of family members is high reported in Rara-Asidhara (6.79 per HH), where 14 HH are living with joint family system. And Pallabada-Kachha has reported low size of family members. Majority 24% of the sample household have 6 members, 20% have 4 members, 16.8% have 5, 8.8% have 8, 7.2% have 7, 6.4% have 9, 5.6% have 3, 4% have 2, 2.4% have 10, 1.6% have 11 & 12, and 0.8% have 15 & 18 family members in the study area.

According to (NPC & CBS, 2019), the study areas population was approximately 1082 people with a population growth rate of 2.4%. The household survey takes only 1.10% of the population is estimated to be more than 60 years old, comprising 3 female and 9 males. 92.96% of the population is between 15 and 59 years old, and 3.99% of population age 5 to 15 or younger than 14 years. In this regard other detail information is presented in Figure, 4.1.

**Figure 4. 1: Age and Sex Composition of Study Population.**



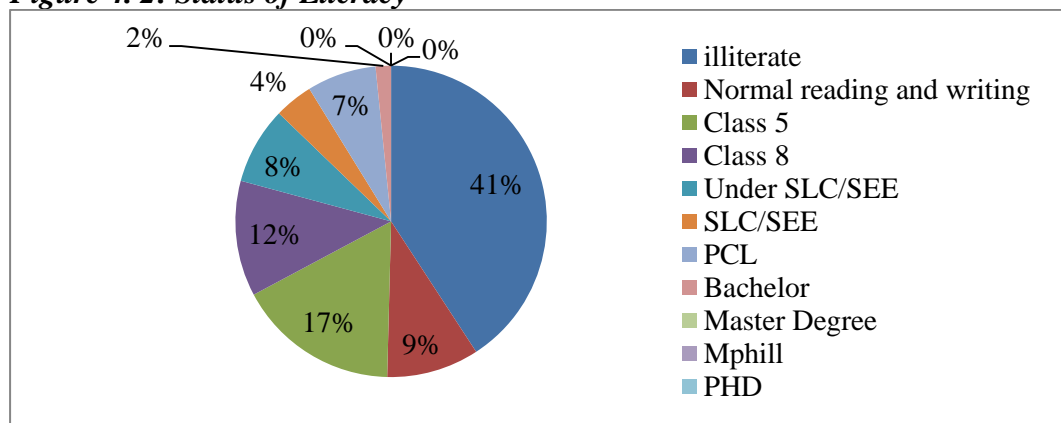
*Source: Household Survey, 2021*

Figure 4.1, reflect well age and sex composition of study population from economics development perspectives in the study areas. The active population age group (15-49 years) contain 92.96% and other 7.4% are dependent population, which has 1.85% are child <5 age group, 3.99% are 5-14 years age group and 1.2% are >60 years old age population in the study areas.

#### **4.1.2. Education**

Education plays vital role in every aspect of people lives. Without education people's attitude and knowledge cannot developed. There are one (1) Secondary School, Two Lower Secondary School, Two Primary School, and five (5) ECD in the study areas. Students go to the near wards for the father education. Overall education status of the sample household population has presented in Figure, 4.2.

**Figure 4. 2: Status of Literacy**



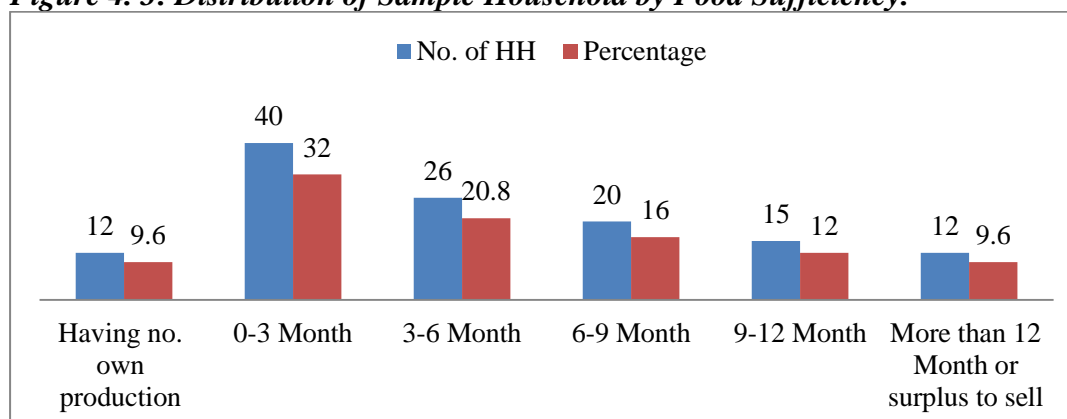
*Source: Field Survey, 2021*

Figure, 4.2. Reflect that the majority 41% of sample respondents are still illiterate. Similarly 9% have no academics qualification but they are just able to normal reading and writing by the efforts of equity efforts of education. Only 17% of sample has completed class 5 (primary education), 12% are class 8 (Basic level), 8% are under SLC/SEE but not they survive of first level of secondary education, 4% was able to survive of the first level of secondary education, 7 % was survive on secondary education, and 2 % of sample population has completed bachelor level from 125 sample household population in the study areas.

#### **4.1.3. Food Sufficiency Status**

Food sufficiency is major variable in GRFP, because when farmers have not access to enough food at all times for a healthy, active life, they can't able to reproduce of any capital (FAO, 1996). So that the study has been taken food self-sufficiency in the study area (Soru R/M, 8 - Mugu) on the basis of their local production (*See in Figure, 4.3*)

**Figure 4. 3: Distribution of Sample Household by Food Sufficiency.**

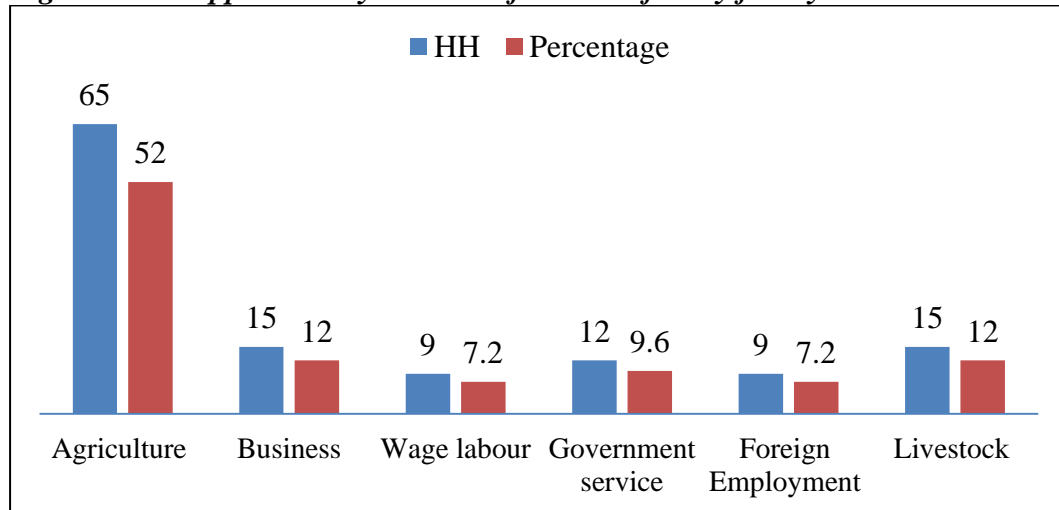


*Source: Field survey, 2021*

Figure, 4.3 shows that only 12 HH (9.6 percent) out of the 125 household have sufficient food by their own production. Most of them 40 HH (32 percent)

have food sufficiency for 0-3 months followed by 26 HH (20.8 percent) for 3-6 months, 20 HH (16 percent), 15 HH (12 percent) and 12 HH (9.6 percent) have food sufficiency for 6-9 months, 9-12 months and no there have any own production respectively.

**Figure 4. 4: Supplementary Sources of Food defect by family household.**



*Source: Field survey, 2021*

The supplementary sources for food defect families are mainly agriculture, micro business including (hotel, herbs, and other), wage labor, Government service job, foreign employment, and livestock option. Figure 4.4, shows that 65 household (52 percent) out of the 60 household (48 percent) have agriculture occupation including substances base agriculture, livestock and herbs activities are the supplementary sources of food defect. Similarly, 15 (12 percent) household are adapting as the sources of food defect by business including hotel, retail shop, herbs, fruits and vegetable etc. Wage labor, Government service, foreign employment and livestock are the supplementary sources of food defect to the 9 HH (7.2 percent), 12 HH (9.6 percent), 9 (7.2 percent) and 15 HH (12 percent) prospectively.

In the study areas, Mainly Buffalo, Cow, Sheep, goat, horse and poultry are domesticated. Livestock is useful for meat as a protein supplement, income generation, and manure making for agriculture field. Although in the study area livestock and poultry as a professional way do not found. They domesticate poultry for day to day purpose or for meat. The study raveled the fact that Khas people in the study area domesticate cow and buffalo for the regular consumption.

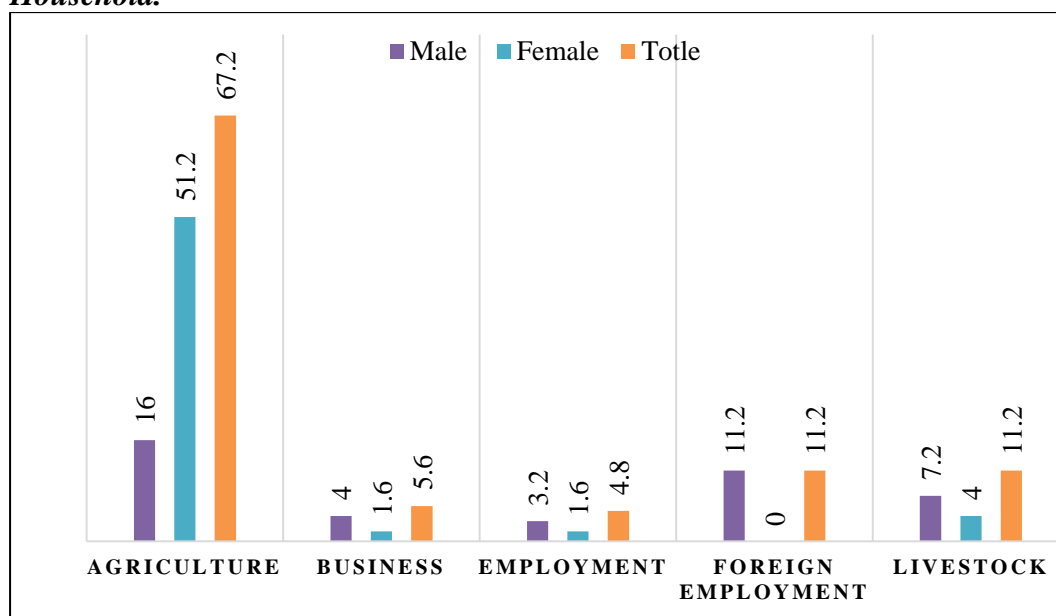


#### 4.1.4. Occupation/ Livelihood Options

Occupation/ livelihood options are a means of securing basic necessities of life through their seeds of activities. As well as means of supporting one's existence, especially helping hand to further investment, technological advancement, empowerment and other agriculture inputs for increase farm production and productivity. In the study areas the farmers have limited livelihood option. Majority 81% of sample households have been embraced in traditional agriculture farming. The survey data reflects that agriculture is the main source of livelihood.

According to the respondents, with the vague constraints of agriculture transformation and increasing barren land effect highly response by lack of agriculture investment, lack of modern farming knowledge, technology advancement, and innovation have led to youth unemployment, poverty, and foreign migration with the diversification of profession. Apart from this work, some people seem to be engaged in other professions in the study areas (*see in figure 4.5*).

**Figure 4. 5: Occupational Distribution of Respondent by Village and Household.**



*Source: Field Survey, 2021*

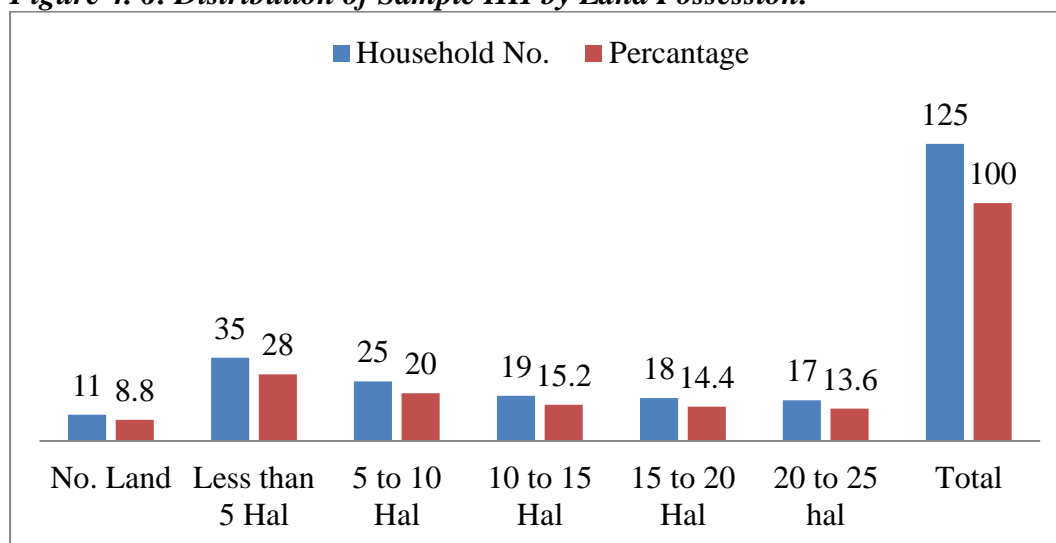
Figure 4.5 shows that majority 67.2% of sample house are engaged in agriculture occupation and 5.6% are embraced business including rural based enterprise, hotel service, herbs and Agra secondary marketer. Similarly 4.8% household have employment, 11.2% household are depend on foreign

employment, and 11.2% have embrace in livestock occupation in in the study areas.

#### 4.1.5. Land Ownership and Barren Land Ratio of the Respondents

Land is one of the major factors of production. In measuring the land holding all types such as agricultural form land, homestead land, pasture etc. Off land owned by family where include. The agriculture land was measured in unit of Hal and household were classified on the basis of size of the sample household is presented in figure 4.6.

**Figure 4. 6: Distribution of Sample HH by Land Possession.**



*Source: Field Survey, 2021*

Figure, 4.6. Shows that 8.8 percent household are landless they have not any registered land but they used public barren land and lease. 28 percent household owned less than 5 Hal 20 have own 5 to 10 Hal of land. Similarly, 15.2%, 14.4% and 13.6% have 10-15, 15-20 and 20-25 hall won land used for agriculture and allied respectively.

#### 4.2. Analysis of the GRFP Related variables (Objective 2)

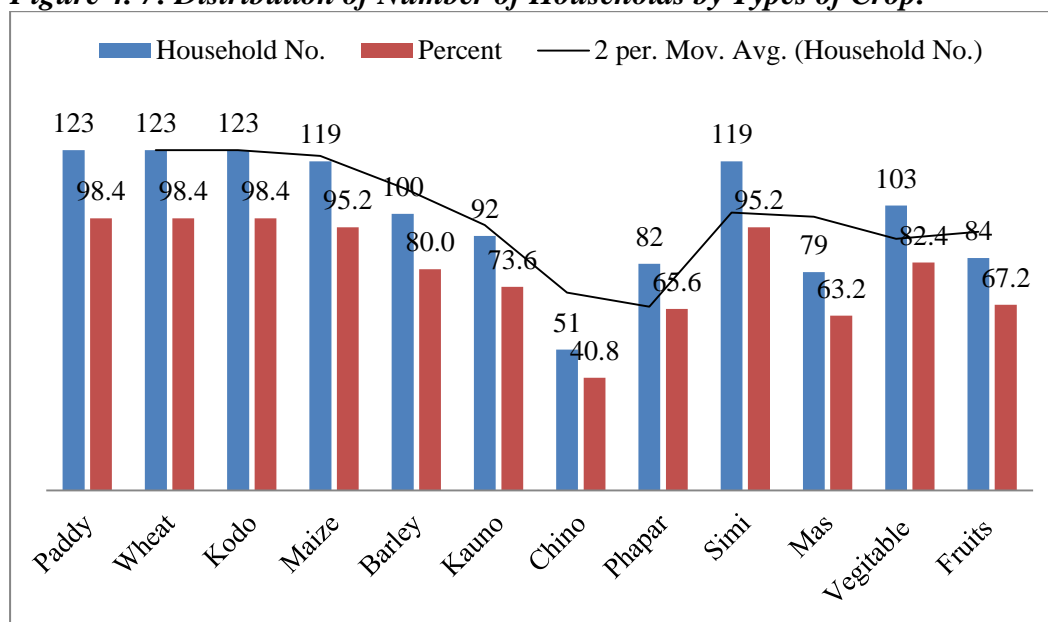
The study is focused to find out the modernizing trend of gender-responsive agriculture development (GRFP) practice with their problems and prospect in Mugu. Therefore, this session was presents the agriculture development-related variable against the field survey data so on.

##### 4.2.1. Major Cropping Practices

The main crops grown in the study area were Paddy, whellet, Kodo, Maize, and Simi. Paddy, Maize, Kodo, Kauno, Chino and Mas was grown in winter season

and Wheat, Barley and Simi grown in winter season and also Simi and white were grown both. According to respondent, existing cropping pattern was largely determined by the types of land. The crop cycle involved Paddy followed by wheat, maize and Barley. Also, Simi, Chino, Kodo, Kauno, Phaper and Mass were grown a season in the upper side. No. of crop growing households is presented in Figure 4.7.

**Figure 4. 7: Distribution of Number of Households by Types of Crop.**



*Source: Field Survey, 2021*

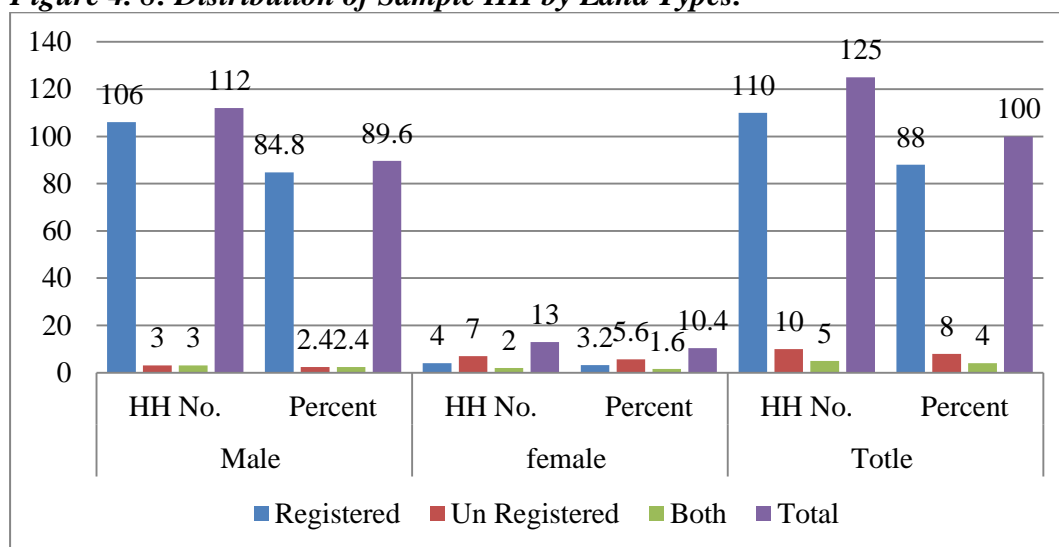
Figure shows, in terms of the number of crop growing households; 98.4 percent Paddy, Wheat and Millet was the most commonly grown practices crops. 95.2 percent household followed by Maize and Simi. Similarly, Barley 80 percent, Kauno 73.6 percent, chino 40.8 percent, Phaper 65.6 percent, 63.2 percent Mas, 82.4 percent vegetable crops and 67.2 percent were followed by fruits in the study areas.

#### **4.2.2. Types of Land Holding**

In GRFP practices land is major factors of women's economic empowerment. The resource can be achieved through equal access to and control over economic resources and opportunities and the elimination of structural gender inequalities in agriculture. Unequal access to land and property is a key obstacle to GRFP on women's economic empowerment. In the study areas gender access in land resources and their holding practices is challenging for gender equality in agriculture and economic empowerment. The land registered practices has been influenced by lack of government land policy awareness, patriarchal

systems, traditional and social practices, norms and power structures within communities and households in the study areas (See in Figure, 10).

**Figure 4. 8: Distribution of Sample HH by Land Types.**



Source: Field survey, 2021

Figure 4.8, shows that the majority of 84.8 percent of male sample have registered land. 10 households (8%) have still revealed unregistered land. 10.4% women have register land out of from 125 sample household. Similarly, only 5 households (4%) are practicing of land register by both in the study.

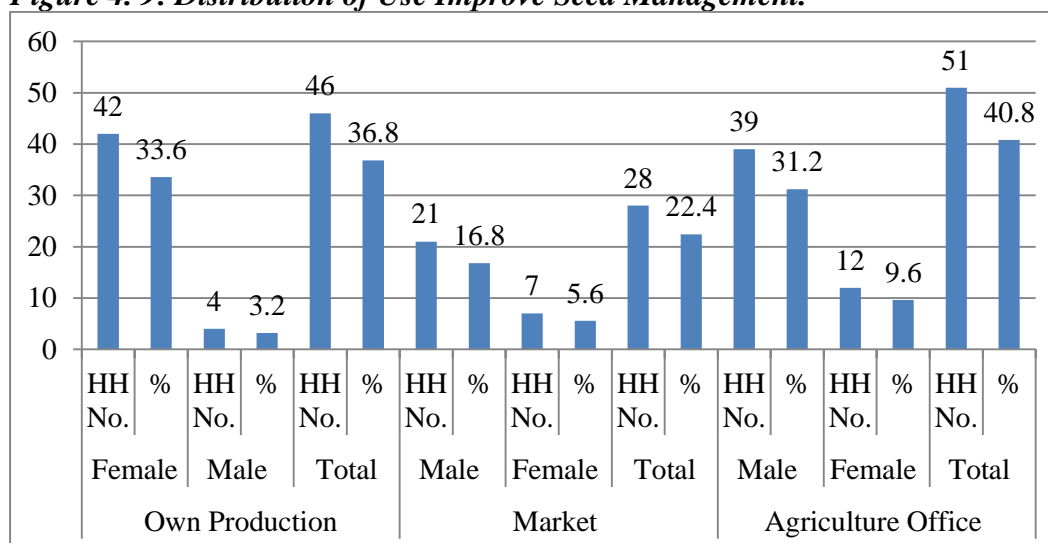
#### **4.2.3. Agro-input for GRFP.**

The backbone of any agricultural revolution is access of farmers to modern agricultural inputs. These agricultural inputs range from improved seeds, fertilizers, tools and technology, agriculture investment or credit facilities and crop protection chemicals to machinery, irrigation and knowledge. The study is focus to find the modernizing trend of agriculture development under the field survey data related to following mention heading as the agriculture input trend and development practices in the study areas.

##### **4.2.3.1. Improve Seed Management**

Improve seeds are critical factors to successful crop production and inevitably farm productivity and profitability .Distribution of sample household by made /supply of improved seed management of various crop is presented in Figure, 4.9.

**Figure 4. 9: Distribution of Use Improve Seed Management.**



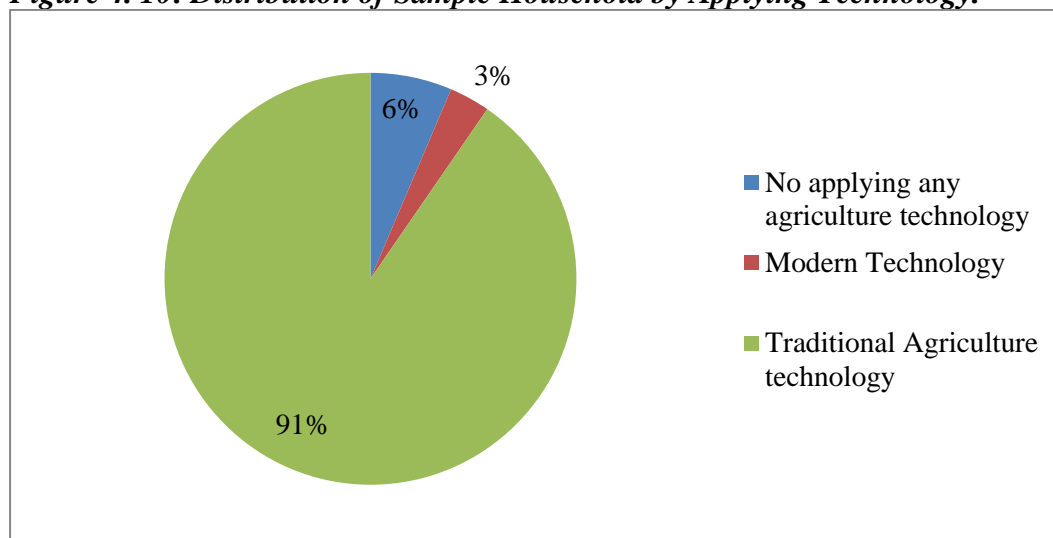
*Source: Field Survey, 2021*

Figure, 4.9. Shows that, majority of 33.6 % female sample household were being managed improved seed by their own production, 5.6% were by market and 9.6% were by agriculture office or other source. Similarly, most of the sample household (40.80%) are use improve heeds from agriculture office, 22.4 percent household were used improved seed from market and 36.8 percent were managed by own production. The figure shows that the female farmer was less access of improve seed management on market and I/NGOs and Government office than male. The female farmer were take higher share of seed management by own production than male.

#### **4.2.3.2. GRFP Tools and Technologies**

In the study areas, more than 67.2 percent of the sample household is involved in agriculture. The agriculture tools and technologies are the key vehicles of agriculture transformation of rural areas. Modern Agriculture System not only for the improvement of farm production, but it also helps to reduce the workload of a farmer, and capital saving for further investment. Therefore, modern as well as traditional agriculture technology is necessities for GRFP practices in rural areas. We must apply the most-modern tools and technology as per the changing pace of time. The traditional/ modern agriculture tolls and technology adaptation practices has pessimistic applying traditional than modern (see in figure 4.10.)

**Figure 4. 10: Distribution of Sample Household by Applying Technology.**



*Source: Field survey, 2021*

Figure, 4.10. shows that majorities (90.4%) of the sample household are still using traditional agriculture tools (i.e. traditional hoe, Kuto-Kodalo etc.) for soil preparation and least (3.20%) of sample household are applying modern tools and technology and 6.40% are not applying both technologies for soil preparation. The situation shows that farmers are still stay on primary stage of agriculture revolution, because of low raising level of awareness and institutional support. Similarly, 6.8% of sample household are using both traditional/modern tools during crop harvesting.

Likewise, weed control is important in agriculture. Weed have always been a bottleneck for crop production and successful production. According to respondents the loss of agriculture food due to weed each and every year. Almost, the farmers were being applying Biological, Cultural, Physical/mechanical, and chemical method of weed control by traditional ways (*see in table 4.3.*).

**Table 4. 3: Distribution of Sample HH by Weed Control Practice**

Weed control Practice	Sample HH.	Percentage
by burning plants residues after harvesting	54	43
by grazing animals	46	37
by mechanical weeding	9	7
by crop rotation and inter-cropping practicing	16	13
<b>Total</b>	<b>125</b>	<b>100</b>

*Source: Field survey, 2021*

Table no.4.3. Shows that 43% of household are applying by burning plants residues after harvesting as a technique of control of weed. Similarly 37% are applying by grazing animals, 7% are control by mechanical weeding and 13% are

controlling by crop rotation and inter-cropping practicing. According to respondents, chemical used only in paddy for to reduce the works lode of women in caring of crops before harvesting. In the study areas the major applied technologies for harvesting crops can presented in below table 4.4.

**Table 4. 4: Different Technologies for Harvesting Crop.**

<b>Traditional/ Modern technology</b>	<b>Function</b>	<b>Sample House</b>	<b>Sample HH %</b>
Sickle	cutting plant of crops	113	90.4
Hay and Ju. And Mai.	Soil preparation	113	90.4
Begaro	Soil preparation	113	90.4
Wooden power trailer	Soil perspiration	113	90.4
Bamboo Doko	Delivery plant of crop	113	90.4
Bamboo cart	Caring crop up to store	113	90.4
Threasing machine	Purifying crops	0	0
Cutting machine	cutting grass	4	3.2
Power trailer	Soil preparation	4	3.2
Tractors	Soil Preparation	4	3.2

*Source: Field survey, 2021*

Table 4.5. Reflects the information on using various types of traditional and modern agriculture tools and technologies that using on harvesting. The data shows that majorities of the sample household are using traditional agriculture tools and technologies while involving in farming activities. Still farmers are not grow up on reduce time, cost and risks of damaging harvesting crop and they were being facing the problems of loss of farm production in the study areas farmers. There was/ is not technological advancement in agriculture, and this situation is still surveying through substances base agriculture farming due to lack of institutional arrangement and poor knowledge of agriculture farming. It was/is practicing subsistence based farming system with traditional agriculture tools and technology. There the farmers was still using various traditional (modern) technology for their agricultural production. (see in table 4.5.).

**Table 4. 5: Different Technologies Using for Caring the Crops/Vegetables.**

<b>Traditional/ Modern technology</b>	<b>Function</b>	<b>Sample Household</b>	<b>Sample HH %</b>
Pipe irrigation (Sprinkle, Drip)	Irrigation to whole land	4	3.2
Channel irrigation	Irrigate only plant through water pipe	90	72
Compost fertilizer	utilizing compost manure	122	97.6
Herbal pesticide (Organic)	Utilize herbs and urine of cattle to crops	61	48.8
Chemical pesticide	Spray chemical on crop	3	2.4

<b>Traditional/ Modern technology</b>	<b>Function</b>	<b>Sample Household</b>	<b>Sample HH %</b>
Chemical fertilizer	mixed chemical fertilizer on soil	3	2.4
High value animal husbandry	Cow, goats, sip, horse and buffalo	114	91.2
Shifting Cultivation	Soil fertility preservation/ weed control	117	93.6
Transhumance	Soil fertility preservation/ weed control	119	95.2
Integrated farming	Soil fertility preservation/ weed control	12	9.6
Tunnel farming	Vegetable production in plastic tunnel	13	10.4

*Source: Field Survey, 2021*

The data from table no.4.5 indicates that majorities of the sample household was applying traditional agriculture technology. According to respondent the factors of using traditional agriculture tools and technology is easy accessibility of natural resources and not access on modern application due to the backwardness. Recently, this areas has been connecting of road network from DHQ Mugu Gamgadhi 15 kilometer with under constructed. There was high possibilities of adaption of modern technology for agro marketing, but the institutional support should be grown up through local initiative for agriculture development.

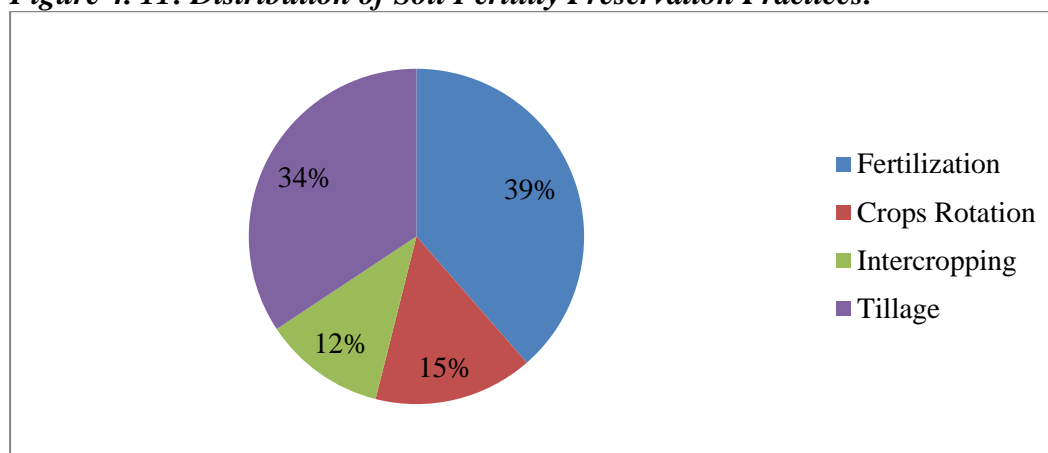
Similarly, majority of sample household (91.2%) were practicing high value animal husbandry for meat and organic manure supply to agriculture activities. Still, 97.6 % of sample household were still using compost fertilizer and only 2.4 % are using chemical fertilizer. Likewise, 3.2% of sample household was access to use pipe irrigation for caring crops and vegetable farming. 72% household was get facility of channel irrigation for irrigation to whole land. Similarly, 48.8% household using herbal pesticide, 2.4% was using chemical pesticide. In this areas the tunnel farming system was expending only (10%) from 125 sample household.

In this regard, the farmers were traditionally practicing of soil fertility preservation and weed control in the study areas. Must of the household are applying shifting cultivation (93.6%) and (95.2%) transhumance agriculture production systems. Similarly small portion of sample household are practicing (9.6%) Integrated farming System (IFS) with animal husbandry and rural cash crops such as apple, potato, chestnut, and possible fruits and vegetable. Likewise, the farmers were being practicing of soil preservation under the special practices



who are not adapted of above presented cultivation system (see on table no. 4.5.), this practices of soil fertility preservation are presented on Figure, 4.11.

**Figure 4. 11: Distribution of Soil Fertility Preservation Practices.**



*Source: Field survey, 2021*

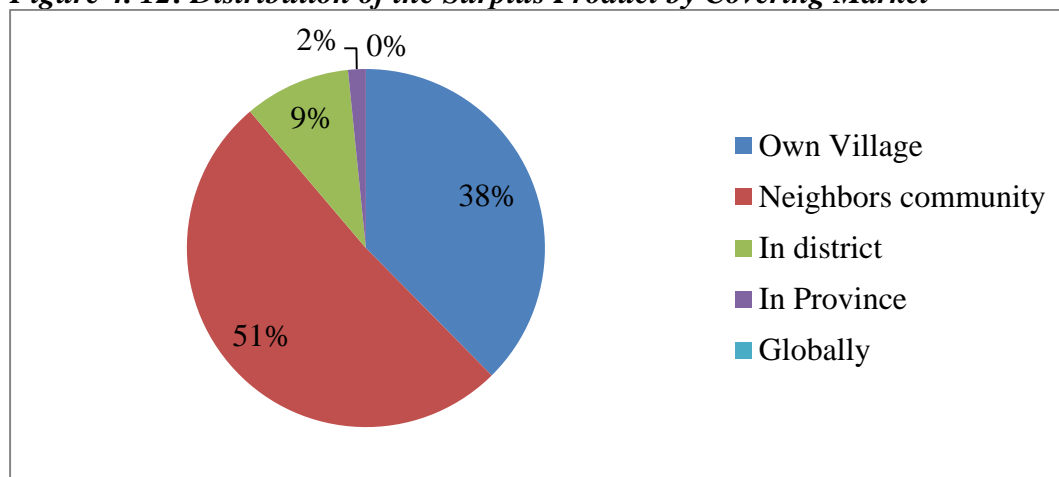
Figure, 4.11, shows that the majority of sample household are applying technique of soil fertility preservation by tillage (34%) and fertilization (39%). Similarly, out of 15 percent and 12 percent are practicing inter-cropping and crops rotation techniques respectively.

#### **4.2.4. Agro-marketing Status.**

Agricultural marketing plays an important role of farmer's welfare not only in stimulating production and consumption, but in accelerating the pace of economic development. Marketing channel depend upon characteristics of farmer product, accessibility, and distance of markets areas. The farms/farmers products growers must have a marketing strategy and it save the values of product through adapted marketing channel. So that, market and marketing channel is the complementary parts of commercial Agra-business activities in rural areas.

In the study areas growers agro-products were supply to neighborhood village, own village and district headquarter Gamgadhi, which is 2-10 Kilometers distance. According to FDG of the targeted respondents, most of the surplus product were sell on own village and same amount of neighbors village, but little supply to DHQ Gamgadhi and other out of district market with facing challenge of high rate of transportation and product damage. The data reflect about the coverage market of surplus agro product in study areas in own village and neighbors (*see in Figure, 4.12.*)

**Figure 4. 12: Distribution of the Surplus Product by Covering Market**



*Source: Field survey, 2021*

Figure, 4.12. Shows that, surplus products coverage market of sample household. Majority (51%) of the ample household was sell their product to neighbors’ village. Similarly, 38%, 9% and 2% were being sealing their product to own village, in district and provincial market. Likewise, the organic products were not still supply to national market.

According to respondents, they were being apply basically two methods of marketing there surplus agro products i.e. Direct and Non-direct. About 51.2% household sell by direct, while the agro product are sold directly to consumer from primarily producer. And other 48.8% are sell by Non-Direct channel, while the product are sold non-directly to consumer from secondary/ marketers of marketing in the study areas. In this regard basically women producer are engaged to this activities. This two method are also completed in 2/2 ways including Farm/Home get and foot path/ on the way is consider to direct channel and shop/retailer and wholesaler are consider to Non-directly channel of marketing in the study areas.

**Table 4. 6: Distribution of Agro-Marketing Channel.**

Location	Direct Channel						Non-direct Channel					
	Farms/Home get		Foot Path/ On the way		Total		Vegetable shop/ Retailer		Wholesaler		Total	
	HH No.	%	HH No.	%	HH No.	%	HH No.	%	HH No.	%	HH No.	%
Rara-Asidhara	11	8.8	2	1.6	13	10.4	3	2.4	0	0	3	2.4
Kachhe	21	16.8	3	2.4	24	19.2	16	12.8	0	0	16	12.8
Pallabada-Kachhe	8	6.4	0	0	8	6.4	9	7.2	0	0	9	7.2
Ruma	8	6.4	0	0	8	6.4	15	12	0	0	15	12
Tarapani	4	3.2	5	4	9	7.2	10	8	0	0	10	8
Gyalahaa	2	1.6	0	0	2	1.6	8	6.4	0	0	8	6.4
Total	54	43.2	10	8	64	51.2	61	48.8	0	0	61	48.8

*Source: Field survey, 2021*

Table 4.6, reflects marketing channel distribution by sample HH and location. The direct channel highly prefers to Rara-Asidhara and Kachhe with compare other by farm/ home get activity. Also by foot path/ on the way due to connectivity of road and geographical distance to possible market. Non-direct channel was also highly adapted to Kachhe and Ruma due to feasibility of mass production of agro-product. Similarly, majority (48.8%) household are applying Shop/Retailer Strategic of Non-direct method, 43.2 % are farm/home get strategy of direct method, and other 8 % sample are apply strategy of foot-path/ on the way sealing strategy of direct method.

#### 4.2.5. Gender Role in Agriculture Development.

In the study areas, gender role in agriculture inequality is major issues of agriculture transformation .Because, work based division of labor in agriculture is highly dominant by female due to the cause of patriarchal systems . Addressing gender role inequality in agriculture is essential to achieving sustainability in agriculture development .The section has examined gender role and relation in agriculture through clear understanding of GRFP in the rural sphere through the tools of gender analysis frameworks based on GESI .

In the context of study areas gender role in agriculture consist as duties or responsibilities taken from household head for livelihood purpose .In this areas, the role of women in agricultural activities is higher than that of men . Unfortunately, women have not been able to come into the mainstream development process at this time due to social values, behavioral practices and laborious of women factors .The study found that although woman's access to resources is the same as means, there is a wide gap in the distribution of resources and benefits due to the cause of woman's educational status and lack of ownership of material /physical resources, as well as cultural reasons (*See in Table 4.7 and 4.8*).

**Table 4. 7: Distribution of Sample HH by Gender Role in Agriculture.**

Gender Role in Agriculture Production	Male		Female		Both	
	HH No.	Percent	HH No.	Percent	HH No.	Percent
Land Preparation	27	21.60	46	36.80	52	41.601
Crop Planting	7	5.60	89	71.20	29	23.20
Weeding	7	5.60	98	78.40	20	16.00
Applying fertilizers and chemicals,	0	0.00	119	95.20	6	4.80
Irrigation	91	72.80	7	5.60	27	21.60

Gender Role in Agriculture Production	Male		Female		Both	
	HH No.	Percent	HH No.	Percent	HH No.	Percent
Carrying crop	6	4.80	107	85.60	12	9.60
harvesting	16	12.80	27	21.60	82	65.60
collects products	17	13.60	67	53.60	41	32.80
Protecting crops from animal and birds	28	22.40	43	34.40	54	43.20
Store preparation and caring	3	2.40	98	78.40	24	19.20
Seed selection and cleaning	5	4.00	53	42.40	67	53.60
Sell agriculture product to market	65	52.00	18	14.40	42	33.60
Food drying. processing and preservation	8	6.40	114	91.2	3	2.40
Preparation and marketing of dairyproducts	91	72.80	22	17.6	12	9.60
vegetable cultivation/ farming	3	2.40	111	88.8	11	8.80
livestock and poultry raising and seals	93	74.40	7	5.6	25	20.00
Handicrafts	97	77.60	9	7.2	19	15.20
Shopkeeper activities	61	48.80	13	10.4	51	40.80
wage labor (off farm)	103	82.40	4	3.20	18	14.40
farm employee	22	17.60	50	40.00	53	42.40
Child care	7	5.60	113	90.40	5	4.00
Food preparation and cooking	3	2.40	96	76.80	26	20.80
water collection and sanitation	15	12.00	86	68.80	24	19.20
Milling grain for home consumption	29	23.20	77	61.60	19	15.20
Caring of animals	9	7.20	23	18.40	93	74.40
Fuel supply (i.e. fire wood)	19	15.20	95	76.00	11	8.80
High prestige work on socio-cultural evidence	98	78.40	4	3.20	23	18.40

*Source: Field survey, 2021*

Overall, table 4.7, shows that gender role in agriculture activities is widely differed, which is based on their cross-cultural practices. From gender perspectives about 51 (41.6%) of the household working together for agriculture land preparation, as well as 23.20% are crop planting, 16% are weeding, 4.8% are applying fertilizer, 21.60% are irrigation to crops or hole land, 9.60% are caring crop, 65.60% are harvesting, 32.80% are product collect, 32.80% are protecting crops from animal and birds, 9.20 % are store preparation and caring, 53.60% are seed selection, 33.60% are sell agro products to consumer market, 2.40% are food drying, process and preservation, 8.80% vegetable cultivation, 20% are livestock raising and sell, 15.20% are handicraft, 40.80% are shopkeeper activities, 14.40% are wage labor, 42.40% are farm employer, 4% are child care, 20.80% are food preparation and cooking, 19.20% water collection and sanitation, 15.2% are

milling grain for home consumption, 74.40% are caring of animal, 8.80% are fair wood supply for fuel purpose, and 18.40% are high-prostitute work on socio-culture evidence based activities with working together.

Likewise, The male farmer has taken share on prostitute works including share of irrigation (72.8%), sells of final agro-products (52%), dairy product preparation and marketing (72.8%), livestock and poultry product selling (74.40%), handicrafts making (77.60%), shopkeeper activities (48.80%), wage labor (82.4%), and 78.40% share of socio-culture activities from total 125 sample household. The women role in agriculture activities is a forcefully higher share in agriculture land preparation (36.80%), crops planting (71.2%), weeding (78.4%), chemical and fertilizer applied to crops (95.2%), caring crops (85.60%), harvesting (21.6%), product collection (53.60%), protecting crops from animals and birds (43.40%), store preparation and caring (78.40%), seed selection and cleaning (42.40%), food drying, processing and preservation (91.2%), vegetable cultivation (88.80%), farm employee (40%), child care (90%), food preparation and cooking (76.8%), water collection and sanitation (68.8%), milling grain for home consumption (61.6%), caring of animal (18.4%), and 76% of sample household share female share in fuel supply from total 125 samples.

### **4.3. Problems and Prospect of GRFP (Objective 2)**

Mainly the study has conducted to find out the major problems and prospects of GRFP in Soru R/M in Mugu district. Various development agencies has been working on methodological and technological change of livelihood of local farmers through GRFP tools. Unfortunately, gender inequality in agriculture and economic empowerment still has not broken strategically. Women participation in both sectors with work load, low productivity, food defect, and psychological fear of product damage are problematic challenging issues of GRFP in study areas. The study has find major challenging problems and prospect of GRFP are; women's less access and control over the resources, lack of service accessibility, wage problems in agriculture and PWPs, agro-financing, work load of women and other natural factors of gender inequality in agriculture.

#### **4.3.1. Access and Control Over the Resources and Benefits**

From a gender perspective, women who play a leading role in agricultural work, they do not have similar access and control over the resources and benefits to production factors of agriculture development disastrously in study areas.

According to the FGD, the participants pointed out that the main reason for the lack of control and access to women is a paternalist cross-cultural practice and policy discrimination. As a result, modernization of agricultural activities in the study areas has been hampered. The study reflects that the access and control over the resources and benefits is proportional direction to gender role in agriculture development in study areas (*sefe in table 4.12.*).

**Table 4. 8: Status of Access and Control of the Resources and Benefits.**

Resource and Benefits	Access				Control			
	Women		Man		Man		Women	
	HH No.	%	HH No.	HH No.	%	HH No.	HH No.	%
<b>Resource</b>								
Land	102	81.6	116	92.8	101	80.8	24	19.2
Labor	119	95.2	87	69.6	103	82.4	22	17.6
Financial Capital	22	17.6	103	82.4	101	80.8	24	19.2
Agriculture tools/ equipment	46	36.8	79	63.2	109	87.2	16	12.8
Agro inputs; Fertilizer, Pesticide, Improve seeds, tools and equipment etc.	116	92.8	65	52	111	88.8	98	78.4
Organization/ institution	27	21.6	98	78.4	105	84	20	16
Education/ Training	14	11.2	111	88.8	108	86.4	17	13.6
Government subsidies and scheme	6	4.8	46	36.8	51	40.8	19	15.2
<b>Benefits</b>								
Income	122	97.6	87	69.6	114	91.2	22	17.6
Incentives	26	20.8	59	47.2	66	52.8	14	11.2
Quality Education	8	6.4	77	61.6	98	78.4	16	12.8
Reinvestment decision	24	19.2	96	76.8	106	84.8	19	15.2
Baying and sealing of agro product (grain, livestock and cash crops)	29	23.2	96	76.8	106	84.8	19	15.2
Credit and lone facilities	6	4.8	54	43.2	109	87.2	16	12.8
High value inventory/goods purchase	7	5.6	118	94.4	105	84	20	16
Employment	2	1.6	46	36.8	106	84.8	19	15.2

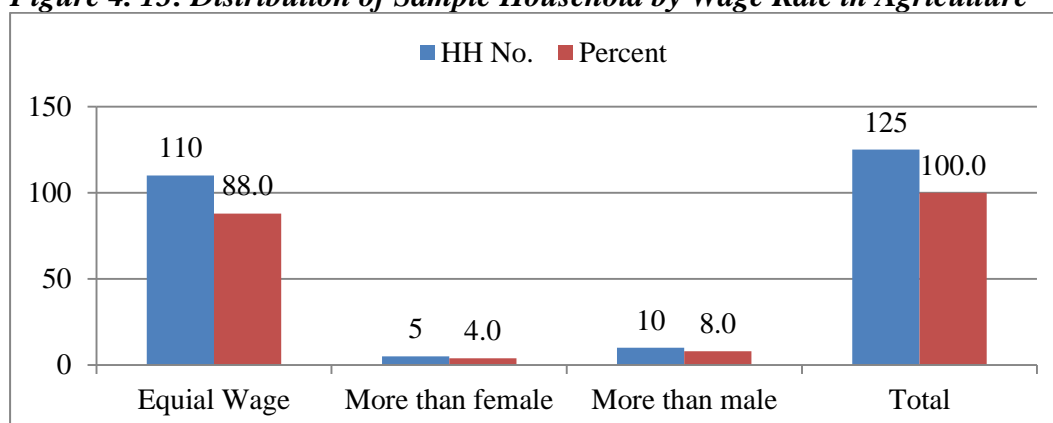
*Source: Field Survey, 2021*

Table 4.8, shows that the resources and benefits is higher access and control by man then women. About 45.2 % of women and 75.5 % of men who have access to resources with control by 24 % female and 78.9 % female with compare to resource and benefit also, 22.4 % female and 63.3% female have benefit access with control by 81% male and 14.5% of female from total 125 no. of sample household respectively.

### 4.3.2. Wage Rate in Agriculture

The study highlights the fact that woman's participation in the agricultural sector has increased due to equal pay. The equal wage policy is strong aspect of gender mainstreaming development. But miss practices by patriarchal agricultural practices of equal pay (not only money it is also socio-culture value) has direct impact on gender responsive agriculture modernization, commercialization and industrialization in rural areas. Majority of target participant in FDG has highlights own shot of equal wage pay for agricultural work forced women to participate, while men encourage to evolved out of farm activities (Payment job), which led to subordinate of woman's participation and that seems as obstacle of women participation, as well as savings, decision-making, organizational and social participation and re-investment. Due to which, women are limited to domestic work, unpaid work and are deprived of basic services. In other hand, the equal wage pay efforts have been heals to increase of woman's participation in public works in thf study areas. In this regard, the study was focus to identify equality of agriculture wage in agriculture works and their impacts to their social life dimension. The data reflect that the equal wage on agriculture works, but dramatically affect to GRFP in the study areas.

**Figure 4. 13: Distribution of Sample Household by Wage Rate in Agriculture**



*Source: Field survey, 2021*

Figure, 4.13, shows that the majority of the 110 (88%) sample household prefer equal wage rate in agriculture. Similarly about 5 (4%) household were prefer more than female and about 10 (8%) are prefer wage rate of more than male in agriculture from 125 sample household population respectively.

### 4.3.3. Decision Process in GRFP

Farm production and productivity is depending on their investment and re-investment (capital, technology, land and labor) of agriculture inputs. In rural areas, the investment/reinvestment decision determined by farms production behavior of the farmers. As well as the extraneous variable i.e. Education level, accessibility. In the study was concern to find who have decision power of marketing or sealing product, investment, using agro-benefits, expenditure, participation, resource mobilization and selection etc. in study areas for agriculture modernization and GRFP. The data reflect that the higher level decision power of GRFP is mostly have higher than female. About 62 (49.6%) household they were negated only for unproductive farm activities like labor, tools and technology selection (*see in table 4.4., 4.5, 4.6. and Figure, 4.9, and 4.11*)

**Table 4. 9: Sample Household by Decision Making Process of GRFP**

Status of design power		Sample HH No.	Percent
Valid	Female	18	14.4
	Male	45	36
	Both Sex	62	49.6
Total		125	100.0

*Source: Field survey, 2021*

Table 4.9, Shows that, the little portion of sample household 18 (14.6%) have decision power to female for product marketing, purchasing, investment/re-investment, participation and resource mobilizations for agriculture commercialization. Similarly, majority of sample household 45 (36%) have power to only male, and other 62 (49.6%) have decision power to both sex. According to sample respondents, this portion is limited to only supportive works of farms activities for agriculture development.

### 4.4.4. Workload of Women in Agriculture

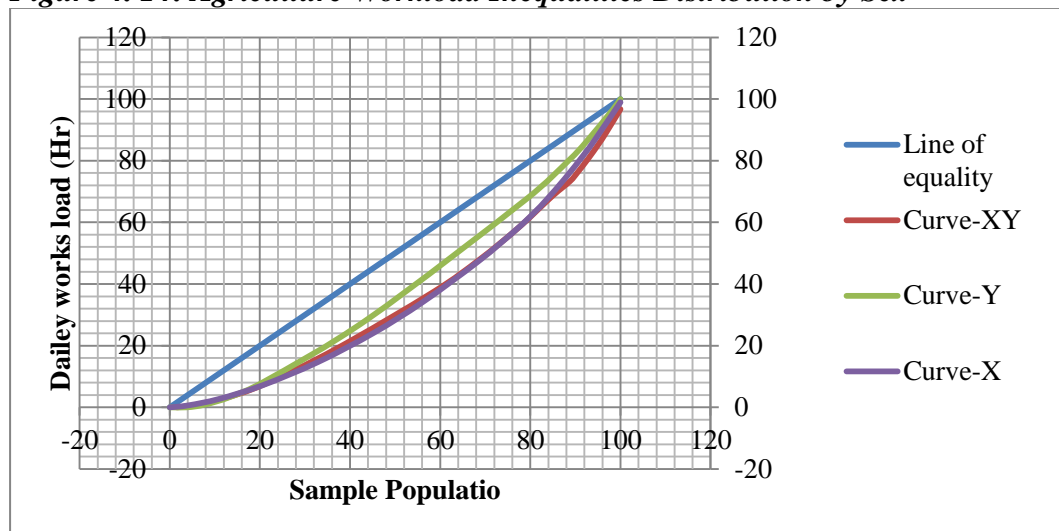
In the study areas, women are takes greater share of labor force in agriculture activities than men. They are being contribute time on family management, child caring, livestock caring by daily basis. As a result, agriculture production and productivity has declined and distribution of profit has been dominated by men. This problem has response to economic empowerment of women as subordinate of GRFP. The study has been highlighted the women workload in agriculture and off form (reproductive) work is challenging problems of GRFP in study areas. Because, workload inequalities is higher than income in agriculture due to the increasing trend of out-migration of male and women



empowerment in agriculture. The Study reflect, maximum 14 hour/day and minimum 5hr/day workloads bearing by female farmers, but maximum 6-9 hr/day bearing by male sample of the study areas farmers (see in Figure,4.14).

The GRFP have conceptualization to describing workload inequality between male and female among individual sample HH. When the curve shows that the proportion of agriculture workload in agriculture between man and women assumed by 43.13% male and 60.44% female sample household. Sample household population plotted on X-axis, daily workload (hours) has plotted on Y-axis with comparing the cumulative value of both X=Y (perfect line of equality) in the GRFP. The curve XY represents line of equality, curve-Y represent male and X curve represent the proportion of female of their workload.

**Figure 4. 14: Agriculture Workload Inequalities Distribution by Sex**



*Source: Field survey, 2021*

Figure 4.14, points on the Lorenz curve represent statements such as, "the bottom 20% of all male sample households has spent time 3.84%, 40% are above 15%, 60% are 35% time spend daily basis, but only bottom 2% female are spend 2.4%, 40% spend 18.87%, 60% are spend 37.34%, 80% are spend 63.2% and 100% sample of female are 96.71% time spend in agriculture activities in the study areas.

#### **4.3.5. Lack of Basic Service Accessibility**

Accessibility of service is important factors, this helps, directly and indirectly, the increment of farm productivity. In the study areas, the ability of good services of agriculture development is poor. On average, 38.31 % of sample household was access to these services including transportation/ road linkage,

agro-tools repairing, agro-processing, collection center, ICTs and broadcasting services. The farmer is gaining knowledge of modern agriculture farming technologies through limited sources of information like training and FM radio services. The facility of transportation and road linkage also poor due to under constructed situation of road linkage from DHQ Gamgadhi-Rara Anshidhara-Tarapani-Dhaina Dhulachaura road section.

According to the respondent, the farmer's production and productivity were not being managed consistently due to the cause of forcibly pay of monopoly rate of transportation fee, mostly response limited means of transportation facilities. Still 49.6% of sample household were use traditional means of transportation and other 51.4 % are using rural Jeep Service on expensive fee. Similarly, there was not any product collection center, but only retail broker shop are available. There is only one Kapas processing center operating by Pragatishil Kirshi Sahakari Sanstha, Soru-8, Mugu. The processing center is not properly functioning to farmers, 97.6% of farmer was not access in this service. The overall service accessibility situation can be presented by table 4.10.

**Table 4. 10: Accessible Service Distribution by Sample Household.**

Accessible services	Functions	Sample household who are in Access	
		No.	Percent
Training	Apply modern farming techniques	40	31.7
Linkage	Supply of agriculture product to market	105	83.5
Tools repairing center	Agriculture tools repairing/Made	91	72.2
Collection center	Save value of product	0	0
Agro-processing center	Purifying and value change of the product	3	2.4
ICTs (Internet/ Broadcasting)	Applying modern technique, knowledge gain and information sharing related to agro farming	71	56.80

*Source: Field survey, 2021*

The survey data in Table 4.10 reflect, majority (68.3 %) of sample house have been still practicing agriculture activities through traditional knowledge. An only 31.7% farmers was gate opportunity of modern farming training from DAO 3 HH (8.7%), I/NGOs 12 HH (29.9%), Cooperatives 15 HH (38.8 %) and 9 HH (22.6%) are taken formal academics knowledge. 83.5% Household were access to

on linkage. Similarly, 83.5% sample household having access on tools repairing serving, and other 16.5 % household are solving problems by neighbors' community and DHQ Gamgadhi distance from 11 Kilometers. There was only 2.4 % of sample household was access on Kapas processing facility with poor functioning. Likewise, 56.80% sample household were access to limited ICTs services i.e. FM (24.6%), Radio Nepal (31.7), and Internet (0.78%).

#### 4.3.6. Problems of Agro-financing

Agro financing is the importance efforts of modern agriculture development. In particular more importance to increase agro-farm production and product, technologies advancement, varieties of seed, fertilizer, and necessary to modern inputs for modernization. Study data reflects the agro-financial services. The data shows that majorities (65.6%) of the sample household are not taking/access on any types of Agra-financing services. Only, 34.4% of sample household were being taking Agra-financing services as forms of lone or grants. There are several financial institution and CBOs. According to the respondent, the small scale farmers always being seeking any types of financing services from cooperatives society, agricultural bank, Govt. office, and I/NGOs as the form of grant and lone. But they have not any opportunity due to the hello-effects. Only DVM Coop. Ltd and Chhayath Coop. are operating for the micro financing services in the study areas. They were forcefully taking lone from informal source (see on table 4.11).

**Table 4. 11: Distribution of Household by Agro-financing Services**

Agro-financing details	Sample Household					
	Number			Percent		
	Grant	lone/ credit	Total	Grant	lone/ credit	Total
Govt.-Agriculture office	3	0	3	2.40	0.00	2.40
ADB	1	2	3	0.80	1.60	2.40
Cooperatives society	0	12	12	0.00	9.60	9.60
Informal source	0	14	14	0.00	11.20	11.2
I/NGOs	11	0	11	8.80	0.00	8.80
Total	15	28	43	12.00	22.40	34.4
Out of access on agro-finance	110	97	82	88.00	77.60	65.6

*Source: Field survey, 2021*

Table 4.11, shows that majority of the sample household (11.20%) taking agro-financing service from informal source. This source contains 32.55% of total agro-financing service range from total 34.40% they have access. Similarly, 6.97% contain Govt. office, 6.97% ADB, 27.90% cooperatives society and

25.58% were cover micro grant of agriculture from I/NGOs. Likewise, The Govt. office was provide agro-grant to only 2.40% of sample HH., 0.8% household was takes grant and 1.6% of agro-lone from ADBL of total 2.4% of agro-financing service, cooperatives society provide lone 9.6% of sample household.

#### **4.4. Impact of GRFP in Agriculture Development (Objective 3)**

GRFP is method and ways of GESI in agriculture. It emphasizes gender equality and social inclusion economics empowerment of both genders through agriculture. The importance measure of GARD engaged equal access of resources and benefits, wage equality, women access to land, reduce workload of women in agriculture, gender friendly technology adaptation and advancement etc. acceptable by their environment.

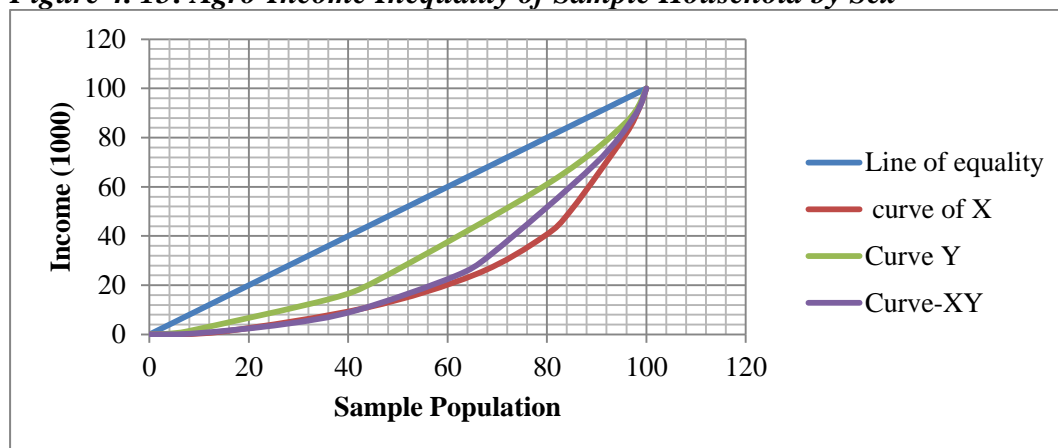
In the study areas, the major positive impacts of GRFP are the possibilities of women entrepreneurship based organics agriculture business and women employment. But in the study area, gender inequality in agriculture is most challenging issues of GRFP due to work based division of labor, patriarchal systems, lack of access to agriculture resources, gender friendly technology, social culture, policy decommission women education. Consequently, women inequality in socio-economic empowerment, less access to education, foreign migration with profession diversification, unemployment, and decreasing farm production and productivity as challenging negative impacts of GRFP. The section has been examined major effects of GRFP likes economic empowerment, employment generation, and access to education on the basis if survey data.

##### **4.4.1. Economic Empowerment.**

The study has been examined how GRFP empowering to farmers equally and what is the status of their income by agriculture activities. The Study reflect, the income of female is very poor than male farmers, this situation represent women are less economic empower than man in the study areas (*see in Figure,4.15*).

The curve shows that the proportion of agriculture income between man and women assumed by 43.13% male and 60.44% female sample household. Sample household population plotted on X-axis, and farmers income has plotted on Y-axis with comparing the cumulative value of both  $X=Y$  (perfect line of equality) in the GRFP. The curve XY represents line of equality, curve-Y represent male and X curve represent the proportion of female of their workload.

**Figure 4. 15: Agro-Income Inequality of Sample Household by Sex**



*Source: Field survey, 2021*

Figure 4.15, shows that, bottom 20% female have 1.27% income, above 40% have 10.97%, 60% have 20%, 80% have 39.93% income, 90% have 65% income and 100% female have 81.51% income from agriculture activities. Similarly, 20% male have 4% income, 40% have 14.56% income, 60% have 35% income, 80% have 62% income and 100% have 89% income in the study areas. In above figure, the ratio of the area between the line of perfect equality and the observed Lorenz curve X is very high than curve Y, so that high inequality in income between male and female in the study areas.

#### **4.4.2. Employment Generation**

The decision-making power with women makes a significant contribution to woman's empowerment as well as access to opportunities. What are the employment opportunities for the respondents in agriculture and other sectors? When asked, 73 percent said it was the same. What this indicates is that the agricultural sector here represents unpaid employment opportunities, while high-paying employment opportunities represent low.

**Table 4. 12: Employment Opportunity in Farm and Off Farm Activities**

	Rating	Frequency	Percent
Valid	High equality	1	0.8
	Equality	92	73.6
	Undecided	8	6.4
	Inequality	15	12
	Negligibly/ High Inequality	9	7.2
Total		125	100.0

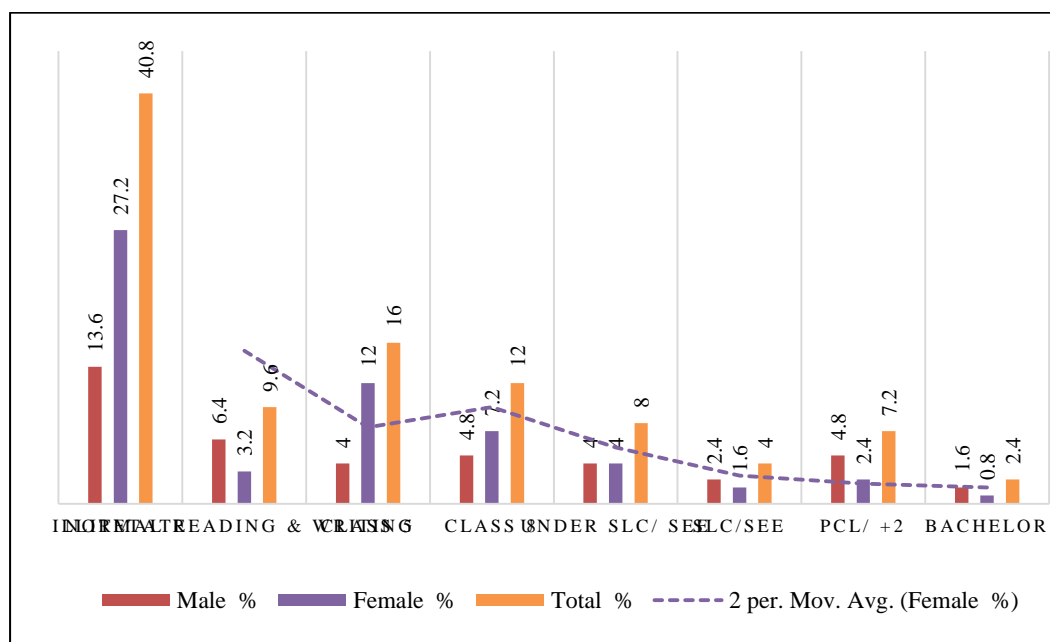
*Source: Field survey, 2021*

Table 4.12, shows that, majority of the sample household 92 (73.6%) has prefer equality, 15 (12%) has inequality, 9 (7.2%) has Negligibly/High Inequality, 8 (6.4%) has undecided and a little 0.8% has prefer high equality respectively.

### 4.4.3. Access to Education

Gender equality in education ensures that women and men not only gain access to and complete education cycles but are empowered equally in and through education. From the gender-responsive agriculture development perspective, education can ensure that equal right to access and control over the agriculture development resources, decision making, participation, and role assigning to both genders with the social justice system. Survey data reflects that the above 16% female are still illiterate. According to respondents the equality of access to education is a very high disparity between men and women due to the cause of lack of accessibility of basic education service from gender perspectives and Patriarchal social systems (*see in figure 4.16.*).

**Figure 4. 16: Household Distribution of Gender in Education**



*Source: Field survey, 2021*

Figure 4.16 shows that the majority 34 (27.2%) female and 17 (13.6%) male are still illiterate from a total of 51 (40.%) of the sample illiterate. Above 4 (3.2%) females and 8 (6.4%) males are able to normal reading and writing by the efforts of equity in education. Similarly, 12.8% female and 4% male has completed class 5 or second stage of primary education, 7.2% female and 4.8% have class 8, 8% under SEE/SLE level formal education completed from total 58.4% male and 52% female sample population in the study areas. Likewise, only 1.6% female and 2.4% male are completed formal education of SEE/SLC level, on 7.2% sample 4.8% male and 2.4% has PCL level and only 1.6% of the male sample has completed higher education of Bachelor level in this study.

## **CHAPTER V**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION**

Gender Responsive Farming Practices (GRFP) is a positive action to achieve gender equality in agriculture. It emphasizes on the equitable distribution of resources, land, technology, and income to the small scale farmers, especially to women for the transformation of agriculture activities, as well as economics and social empowerment by removing the workload of women. The study has focused to find how GRFP practices has been practicing by the analysis of practices and gender role in agriculture, as well as extraneous variable such as problems and prospects of GRFP in study areas. The section has been present finding of the study, which is categorized on the section of summary, conclusion and recommendation for the further implication.

#### **5.1. Summary of Findings**

The present study entitled "Gender Responsive Farming Practices (GRFP) in Soru Rural Municipality, word no. 8, Mugu" is based upon 125 sample household and out of total 178 household in word no 8 of the municipality. The total population of this municipality according to municipality record, 2019 is recorded 12258. Out of total population 5782 were male and 6476 were females. To carry out the study efficiency questionnaire, FDG, KII and observation related to agriculture development with gender perspectives was implemented. The study was adapted systematic sampling procedure of probability sampling method, and also adapting convenience/ purposive sampling for additional information of GRFP through KII and FDG in the study areas. The major key finding can present by following points.

- The study areas is most of the feasible of economics development from socio-demographics perspectives, which the active population age group (15-49 years) is more than dependent population age group contain 92.96% and 7.4% respectively. Under constructed road connectivity and monopoly transformation facility is challenging for agro-marketing in this areas. About majority of the 74 (59.2%) sample has male head of the family and other 51 (39.8%) household head has female. Total 676 family members are reported, and average family size is 5.41 from 125 sample household.

- About 41 % sample respondents are still illiterate (27.2% female and 13.6% male). Above 9% people are able to access in education by education for all efforts by normal reading and writing. There is poor accessibility of basic education service where are one (1) Secondary School, Two Lower Secondary School, Two Primary School, and five (5) ECD in the study areas.
- About 81% of sample households are directly engage in agriculture occupation. Out of total sample household 58.6% female and 41.4 % were females engaged in agriculture and livestock allied activities. Above 98.4 % people were commonly practices of Paddy, Wheat and Millet growing. Similarly 95.2 percent household followed by Maize and Simi, 80% are Barley, 73.6% were Kauno, 40.8% were Chino, 65.6% Phapar, 63.2% were Mas, and 82.4 % grows veritable crops, and 67.2 % were followed by fruits in the study areas.
- The study found only 9.6% household have sufficient food by their own production and they seals their surplus product to nearest market for income generation, 90.4% sample house has still lived on food defect situation. They managing food defect from the sources of agriculture, micro business including (hotel, herbs, and other), wage labor, Government service job, foreign employment, 97.6% were by livestock and Parma wage labor.
- The study find out the 8.8 % HH have still revealed unregistered land. Only 1.6% have both practices of landholding from.
- The most of the 40.80% farmers was manage improve seeds from agriculture office, 36.8% are managed their own production and 22.40 percent are supply improve seed from market.
- The situation of applying modern agriculture tools technology is very poor, while 90.4% of sample household were still used traditional agriculture tools and technology for soil preparation, soil fertility preservation, weed control, irrigation veritable farming and crops growing. Only 20% of sample household are applying semi-modern tools and technology and 6.40% are not applying both technology for soil preparation.



- There is several financial institution. Above 65.6% of the sample household are not taking/access on any types of agro-financing services. And only, 34.4% of are taking financing services as a forms of lone or grants from cooperative and government agency and above 11.20% are taking agro-financing service from informal source with high rate of interest.
- The surplus products coverage market of the sample household is own village, neighbor village, and little amount in DHQ Gamgadhi and out of district market by secondary marketers. Basically farmers were applied two methods of marketing there surplus agro products i.e. Direct and Non-direct. About 51.2% household sell by direct. And 48.8% are sell by Non-Direct channel.
- The service accessibility agriculture development is poor. Only average, 38.31 % of sample household was access to transportation/ road linkage, agro-tools repairing, Agra-processing, collection center, ICTs ad broadcasting services. There is not any product collection center, but only retail broker shop are available. There was only one Kapas (Cotton) processing center established on not properly functioning to farmers, 97.6% of farmer was not access in this service. And about 31.7% farmers was gate opportunity of modern farming training from DAO, I/NGOs, Cooperatives. About 83.5% sample household were access on tools repairing serving, and other 16.5 % household are solving problems of agro tools repairing by neighbors community and DHQ Gamgadhi distance from 11 KM. 56.80% sample household were access to limited ICTs services i.e. FM (24.6%), Radio Nepal (31.7), and Internet (0.78%) in the study areas.
- 59.11% female and about 27.55% of male farmers were played their role in agriculture production, which on average 25.15% of the sample household are working with both sexes. About 45.2 % of women and 75.5 % of men who have access to resources with control by 24 % women and 78.9 % men with compare to resource and benefit also, 22.4 % female and 63.3% female have benefit access with control by 81% male and 14.5% of female from total 125 no. of sample household. The study highlights the

fact that women's participation in the agricultural sector were increased due to equal pay. The decision power of GRFP is mostly have higher than female. About 49.6% household they were negotiate only for unproductive farm activities like labor, tools and technology selection and seals of product with appropriate marketing channels.

## **5.2. Discussion of Finding**

The topic often considered one of the most important part of the thesis of GRFP. In this discussion, i agree that the assumption of Bosrup's theory of agriculture change (1956) and Schultz's theory of agricultural transformation has emphasize about agriculture development through agricultural intensification, technological intervention, sustainable population pleasure. But I strongly disagree from the GRFP potential. Because, those theories also ignored gender factors in agricultural change as well as he theory should have focus on only technical intervention, rather than grater gender concern in technology adaptation. In this pioneer, I have clarify by the reference of the study finding, I insist of both technology adaptation and women empowerment through institutional development in this areas. Where the study found more than 41% sample respondent are illiterate, due to the cause the higher proportion of population age group 15-49 is not taking pleasure about agriculture change. Similarly, the study found situation of applying modern agriculture tools and technology is less prior than indigenous (Traditional), while 90.4% of sample household were still used traditional agriculture tools and technology for soil preparation, soil fertility preservation, weed control, irrigation veritable farming and crops growing. Sadly, the study areas farmers feel that about "it is better to eat the fish than to learn the art of fishing". Only about 20% of sample household are applying semi-modern tools and technology due to the cause of gender issues and operating knowledge when they take incentives by government project.

Michael and Douglas, 1984 has emphasized about on Cross-cultural theory also support Boserup's idea. As well as the theory introduces two new assumption likes climate and livestock subsistence as the strongest predictors of female participation in agriculture can resulting in reduced participation of women in agriculture. In this regard, the women workload is not only depend climate and animal domesticated but also study found patriarchal system of farming is another responding factors of GRFP in the study areas, because 59.11% female and about

27.55% of male farmers were played their role in agriculture production, which on average 25.15% of the sample household are working with both sexes. About 45.2 % of women and 75.5 % of men who have access to resources with control by 24 % women and 78.9 % men with compare to resource and benefit also 22.4 % female and 63.3% female have benefit access with control by 81% male and only 14.5% of female from total 125 no. of sample household.

Nepalie's government has taken initiative of gender concern in agriculture policy, strategy, plan, and program has adapts the mechanism of GESI in GRFP by the recommendation of CEDAW, BPFA and MDGs to SDGs. Similarly, the GoN has adapt various provision such as equal wage in agriculture, GAD, equal participation (GMS, 2006), right to information about farming knowledge, promotes women and environment friendly (Gender friendly) technologies (AMPP,2014), provision of agro subsidized as lone or grant for agro inputs, provision of joint ownership certificate in land and also 20% discount on registration charge whenever land is purchased in the name of a female member of the household by 11th plan (2007-2010), Agro-insurance, credit and lone for entrepreneurship development, commercialization, industrialization and competitive quality development by 15th plan., improve sustainable income and food security, and product marketing (ASDP) etc. But, in reality only equal wage policy is very successive than other components of GRFP.

The study reviled inequalities of access in factors of agriculture production, when 8 % HH have still used unregistered land. Only 1.6% are practices by both sex and only 10% female house hold have registered land out of 125 sample HH. Product marketing channel is mostly prefer by both home get, footpath, and vegetable shop due to the cause of service accessibility and lack of agro infrastructure such as processing and collection center in the study areas. In this areas the gender role in agriculture depend on works based division of labor. Similarly, 49.6% sample HH has prefer decision process by both gender in GRFP. Accessible agro service distribution in the study areas is also good, but the goal of GRFP cannot be achieve, as a result of lack of agro financing services, agro processing service, collection center, unequal access and control over the resources and benefits, and patriarchal system of farming. So that we conclude that the policy and program only limited on formality of paper not in practical.

The study areas is more potential to achieve the goal of Karnali Provincial Government through organics farming and domesticate of livestock. But, the small scale women farmers are still out of targeted service due to the cause of accompanied of political power, flexible mechanism of monitoring and implementation, lack of policy dissemination to farmers. Finally, based on the results of the study, the government should have to not only focused on subsidies but also be concerning to economic development with gender equality and social inclusion (GESI) through cooperation, transfer and adaptation of gender-responsive technology by government agencies, commercialization of products with the appropriate marketing channels, dissemination of legal provision or policy of GRFP, development of the agro infrastructure, and equitable GRB and subsidies in agriculture. It seems useful to enable the local bodies to develop the distribution system in the study areas.

### **5.3. Conclusions**

This study highlights to find the modernizing trend of gender-responsive agriculture farming practice in Soru Rural Municipality, 8 Mugu. The study has found out of total economically active population were engaged more than half in agriculture, and livestock raising activities. The proportion of female engaged in farming is higher than men population. The women role in agriculture production was highly influenced by works division of labor system, as well as exteriors variable such as education, family structure level of technology adaptation, farm resources, and low level of political/legal awareness. GRFP practices in these areas were more takes share by women, but the higher involvement share controlled by men is the cough of food defect, poverty, illiteracy, lack of agriculture commercialization & modernization. Because the women are constructed for every action of GRFP final decision is mostly dominant by males.

The traditional agro-technological practices have been fostering organics crops especially bean (Simi), Millet, Buckwheat (Phapar), Black gram (Mass), and Barley etc. rising in Mugu. Commercial organic farming and animal husbandry practices have been becoming potent income sources for the local people. There is one of the viability of organic commercial farming for women economics empowerment. But, the farmers were not adapting modern agriculture technologies and that has constant their productivity and profitability as substances based. Also, farmers' livelihood was being vulnerable. Farmers have

poor accessibility with service delivery mechanism related to gender responsive commercial farming and modern agriculture technologies.

However local farmers are also forcefully applying traditional technologies of harvesting, land preparation, weed control, and soil fertility preservation. Government institutions and non-government institutions are offering skill development training and providing information on modern agriculture farming technology to rural farmers. Small proportion of rural farmers who adopting modern rural agriculture technology and they are successfully producing a high quantity of farm products. They are getting opportunities to generate comparatively more income than those who are still adopting traditional family substances based technology. However, the farmers are still facing the problems of fear of damage and low return due to the lack of agro collection and processing centers in the study areas.

The gender participation in agriculture activities is highly affected by equal wage systems on agriculture, that caught the female is taking a high share of agriculture activities by Parma, such activities are crops caring, plantation, storing, harvesting, product transfer, irrigation, manure prepare, animals caring, etc. The male was choosing directly high values off-farm works and other socio-political works. In addition, men who take less share in agricultural work, but have been taking more control over woman's income and agriculture development resources (i.e. land, labor, capital and technology). This study shows that the burden of woman's agricultural works is the workload of daily household chores lack of agro financing service to the female, poor marketing systems is an obstacle to GRFP in study areas. Majority of the farm product has sold by secondary marketers at home on constant price of product due to lack of service accessibility.

Finally, the government should be addressing these issues of GRFP on the existing provision of gender responsive policy to achieve socio economics empowerment of local farmers through agriculture transformation.

#### **5.4. Recommendations**

Based on the findings of this study, the related stakeholders of agriculture should be applying GRFP as tools of methodological and technological development of rural areas by agriculture modernization with a justice system. The study has emphasized major recommendation on three levels for socio-

economic transformation through the efforts of gender equity based sustainable agriculture development practices in the rural areas;

#### **5.4.1. For Practice Level**

- ❖ There is low socio-economic status of women in Soru Rural Municipality-8, Mugu. Different types of alternative approach of education should be introduced within the village for ensuring right to education for all of women. The education institution contributes to bring about quick change in the attitude of society for raising their condition.
- ❖ In addition to agriculture activities, rural women have to perform their regular household activities. They have to work hard within inefficient and traditional tools and household facilities. Therefore, new ideas, technologies (labor saving devices, smoke fewer stoves in kitchen etc.) that increase women efficiency and same time reduce their drudgeries are to be introduced in rural areas.
- ❖ In the study areas credit facility are not directly available to women because of institutional bureaucratic system, as well as socio-economic tradition. Provision of credits groups' liability should be made in order to motivate the women farmers towards income generation activities.
- ❖ The easy coordination and coordination system should be developed by local stakeholders to cooperatives and cottage industries to support rural women and marginal farmers' access to easy loans without collateral for agriculture production and agribusiness.
- ❖ An information desk and FM radio should be establish to enable access to information related to various legal and normative provisions such as tax rebates, subsidies, entrepreneurship skills, land policy of joint registration systems and training along with access to loans to support women and poor and marginal farmers.
- ❖ Since women participation in agriculture activities is strategically very poor, the concerned of agriculture development office should focus on increasing women participation in training, group visit demonstration and exhibition etc.
- ❖ The development organization should be concern to develop and implement livelihood strategies and create protection measures through a gender friendly

community-led, bottom-up approach for GRFP and enhance the mobility and freedom of women in economic, social and public life.

- ❖ Strengthen civil society organizations and the media to raise awareness of gender discriminatory practices in the agricultural sector and in the rural economy;
- ❖ The people who are involved in agree-value chains for enterprise development by linking them with rural finance organizations and cooperatives;

#### **5.4.2. For Policy Level**

- ❖ Government should be develop partnerships with the National Agriculture Research Council, MoAL, I/NGOs, agriculture research agency and University to help promote evidence-based gender-responsive agriculture research in the rural areas.
- ❖ The government should be promoting policy research and analysis on gender equality and rural women empowerment in the agricultural sector to inform policies and strategic planning.
- ❖ The government should be strengthening the capacity of agriculture development related government and development agencies to design agriculture and rural development-related surveys from gender perspectives.
- ❖ The research and development activities should be frequently conducted in rural areas not only limited in urban sectors by project, govt., university etc.
- ❖ The central government should be play central monitoring role of revise existing sectorial and thematic policies related to national agriculture development through GESI analysis for GRFP, as well as provincial government can helps to local government for policy dissemination, legal acquisition through Justice subsidies policy, plan and strategy to uplift lives of rural people through the efforts of right to equal access in livelihood resources (i.e. both land ownership practices) of agriculture development, education, health, irrigation, transportation and ICTs services.
- ❖ The government should ensure active participation of rural women as well as women-led civil society organizations and cooperatives at all levels,

including in the formulation of agriculture and rural development-related policies, strategies and plans.

- ❖ Government should encourage rural financial institutions, such as micro-finance and development banks, cooperatives societies to develop special promotional packages that include group collateral, business literacy, insurance schemes, and assurance of markets for agriculture products with low premiums agriculture business transformation loans in rural areas.
- ❖ The government should play vital role of coordination, collaboration and lobby with MoF and MoAD, I/NGOs, CBOs , Civil society and other development agency for an increase of the gender-responsive agriculture budget allocation, enforcement of government policies on women's land rights and pertinent legal reforms.
- ❖ The local government should be developed mechanism of technology transfer and adaptation for rural women farmers along with easier access to subsidies and grants. Provide information and training to build the capacity of rural women to adapt to new technologies for agriculture transformation.
- ❖ The local government should collaborate to the central government in leasing abandoned private and public land as an alternative option for poor women and marginal groups to increase their livelihoods through agro-activities.



## REFERENCES

- Acharya, B. (2017). *Sociology of Gender*. Kathmandu, Nepal: National Book Center, Bhotahiti Kathmandu-Nepal.
- ADB. (2012). *Sectoral Perspectives on Gender and Social Inclusion: Agriculture Sectoral Series- Monograph 1*. UK: Asian Development Bank, Department for International Development, UK and The World Bank. doi:ISBN 978 9937 2 4144 1
- Adhakari, D. (2014). *Rural Research Methodology*. Kathmandu-Nepal: Quest Publication Pvt. Ltd., Kirtipur, Kathmandu-Nepal.
- Aryal, A. (1992). [Unpublished MA Thesis] *Vegetable Marketing in Kathmandu Valley*, . Kirtipur-Kathmandu-Nepal: Central Department of Economics, TU, Kirtipur, Kathmandu, Nepal. .
- Basnet, K. (1999). Book Review: Nepal Agriculture Prospectives Plan. *CNAS Journal, volume no. 26*(Issue no. 2).
- Bellon et. al, M. R. (2006). "Poor Farmers Perceived Benefits from Different Types of Maize Germplasm: The Case of Creolization in Lowland Tropical Mexico". *World Development. 34 (1)*, pp. 113-129. Mexico: World Development.
- Beneria, L., & Sen, G. (1981). Accumulation, Reproduction, and Women's Role in Economic Development: Boserup Revisited. *The University of Chicago Press Journals, Edward H. Levi Hall, 5801 South Ellis Avenue-Chicago Illinois 60637773.702.1234, Vol. 7, No. 2., 279*. Retrieved January 06 (06:09 UTC), 2020, from <https://www.jstor.org/stable/3173878>
- Bhattraï, H., & GC, K. B. (2019). Intelligence and sex differences. In H. Bhattraï, & K. B. GC, *Measurement and Evaluation in Education* (p. 221). Kathmandu-Nepal: Jupitar Publication pvt. ltd., Kathmandu.
- Boserup's, E. (1956). *THE CONDITIONS OF AGRICULTURAL GROWTH: The Economics of Agrarian Change under Population Pressure*. London : George Allen & Unwin Ltd Ruskin House Museum Street.
- Brown, j. k. (1963). Across-Cultural Study of Female Initiation Rites. *American Anthropologist, 65*, 837-856.
- CARE. (2015). *Gender Relations in Nepal Overview: Nepal*. Kathmandu-Nepal: Care-Nepal <http://emergencygender@careinternational.org>.
- CBS. (2012). *Population and Housing Census, 2011, National Report, volume 1 Table no. 25*. Nepal: NPC.
- CBS. (2014). *National Population and Housing Census, 2011*. Census, Central Bureau of Statistics , National Planning Commission Secretariat, Kathmandu-Nepal. doi:PDF
- CBS. (2019). *District Profile of Mugu*. Kathmandu: GoN-NPC-CBS.
- Chaudhari, D. (2018). Agricultural Policies and Rural Development in Nepal: An Overview. (B. P. Badal, Ed.) *Research Nepal Journal of Development*

- Studies*, Vol.No.1(Issue no. 2), p, 34-46.  
doi:<https://doi.org/10.3126/rnjds.v1i2.22425>
- DVN. (2018). *FINAL REPORT: Inter Provincial Dependency For Agricultural Development* . Kathmandu, Nepal: Ministry of Agriculture, Land Management and Cooperative, Department of Agriculture- Harihar Bhawan, Lalitpur Nepal.
- ECoN. (2016). *Election commission Act, 2073*. Kathmandu Nepal: Election Commission of Nepal.
- FAO. (2011). *WOMEN IN AGRICULTURE*. Rome, Italy: Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla-00153 Rome, Italy.
- FAO. (2019). Building a Resilient Churia Region in Nepal. In F. a. Nations, & FAO (Ed.), *Environmental and Social Management Framework* (FAO, Trans., p. 409). Nepal, Nepal: FAO. Retrieved September 2019, from <http://www.fao.org/3/ca6456en/ca6456en.pdf>
- FAO. (2019). *Country gender assessment of agriculture and the rural sector in Nepal*. ISBN 978-92-5-131269-8. Food and Agriculture Organization of the United Nations Representation in Nepal, United Nations Building, Pulchowk-Lalitpur, Kathmandu- Nepal, FAO-NP@fao.org. Kathmandu: @ FAO-NP@fao.org.
- Ghimire, A., Khadka, B., & Bhattra, K. (2011). *Policy and Approach of Rural Marketing*. Nepal: Kshitiz Prakashan TU, Kirtipur (opposite Management Building).
- GoN\_CAS. (2015). *The Constitution of Nepal*. (NLS, IDEA, & UNDP, Eds.) Nepal, Kathmandu: Ministry of Law(MoL), JaPA, Kathmandu-Nepal. Retrieved from <http://extwprlegs1.fao.org/docs/pdf/nep155698b.pdf>
- GOOD. (2019). *Strengthen Girls' and Women's Political Participation and Decision-Making Power:Facts, Solutions, Case Studies, and Calls to Action*. Nepal .
- Harris-Todaro's. (1970). Todaro's Model of Rural - Urban Migration and Unemployment. In *The economics of Development and planning* (p. 143).
- Huntington, S. (1975). Issues in Woman's Role in Economic Development: Critique and Alternatives. (U. o. Be, Ed.) *Journal of Marriage and Family*, Vol. 37, No. 4, Special Section: *Macrosociology of the Family* (Nov., 1975), pp. 1001-1012, Vol. No 37( Issue No. 4), pp. 1001-1012. Retrieved 06-01-2020 06:17 UTC, from <https://www.jstor.org/stable/350849>
- IFAD. (2017). *Agriculture Sector Development Programme (ASDP) Final Programme Design Report*. Nepal: International Fund for Agricultural Development (IFAD).
- Karki, S. C. (2019). *SOCIO-ECONOMIC STATUS OF APPLE FARMERS' IN CHHAYANATH RARA MUNICIPALITY*,. Tikapur-Nepal: Tikapur Multipal Caampus, Tikapur- Kailali. Retrieved April 2019
- Karl, M. (2009). *Inseparable:The Crucial Role of Women in Food Security Revisited*.

- Lewis, W. A. (1954, May). Lewis Theory of Unlimited Supplies of Labour. In M. Jhingan, & B. Jhingan, *THE ECONOMICS OF DEVELOPMENT AND PLANNING* (42nd ed., p. 126). Manchester: Vrinda Publication P(Ltd.), B-5, Ashish Complex, Opp. Ahlcon Public School, Mayur Vihar Phase-I, Delhi-110091.
- March, C., Smyth, I., & Mukhopadhyay, M. (1999). *A guide to Gender-Analysis Frameworks*. London: Oxfam Publishing, GB, 274 Banbury Road, Oxford OX2 7DZ, UK.
- Michael, B. L., & Douglas, W. R. (1984). Sexual Division of Labor in Agriculture. *American Anthropologist Association, New Series, Vol. 86, No. 3 (Sep., 1984), pp. 568-583, Vol. 86(Issue No. 3), pp. 568-583*. Retrieved 06-01-2020 06:25 UTC, from <https://www.jstor.org/stable/678338>
- Mitchell, C. (2011). *A narrative inquiry of women's lives in Mugu, Nepal: identities, power relations and education*. Queen's University Belfast, Education. Canada: Queen's University Belfast. Retrieved December 2011
- MoAC & ADB. (2006). *Gender Mainstreaming strategy (GMS) of Ministry of Agriculture and Cooperatives as per the Government reform program*. Kathmandu Nepal : Ministry of Agriculture and Cooperatives.
- MoAD. (2013). *Collection of Agriculture Related Policy*. Kathmandu- Nepal: Ministry of Agriculture Development, Shinghadarbar-Kathmandu, Nepal.
- MoAD. (2013). *NATIONAL SEED VISION: Seed Sector Development Strategy (2013-2025)*. Kathmandu, Nepal : Government of Nepal, Ministry of Agricultural Development (MoAD), National Seed Board, Seed Quality Control Centre- Hariharbhuvan, Latipur, Nepal.
- MoAD. (2014). *Agriculture Mechanization Promotion Policy (AMPP)* . Nepal: Ministry of Agriculture Development (MoAD)- Nepal.
- MoAD. (2016). *Agriculture Development Strategy (ADS) 2015-2035*. Nepal: Government of Nepal, Ministry of Agricultural Development- Singhadarbar, Kathmandu\_Nepal.
- MoF. (2019). *Economic Survey 2017/18*. Nepal: Goernment of Nepal, Ministry of Finance, Singha Darbar kathmandu- Nepal.
- Moser, C. (1993). *Gender Planning and Development; Theory, Practics and Planning* (1st Edition ed.). London: Routledge. doi:<https://doi.org/10.4324/9780203411940>
- NPC & CBS. (2019). *District Profile of Mugu*. Kathmandu: GoN-NPC-CBS.
- NPC. (2017). Nepal's Sustainable Development Goals[SDGs] Status and Roadmap: 2016-2030. In GoN-NPC, *Sustainable Development Goals [SDGs] Status and Roadmap: 2016-2030*. Nepal: Government of Nepal, National Planning Commission [NPC], Nepal.
- NPC. (2019). *Fifteenth Five Year Plan (2076/077-2080/081)*. Nepal: GoN\_National Planning Commision (NPC), Singhadarbar Kathmandu, Nepal.

- Olson, H. (1996). The power to Name : Marginalization's and Exclusions of Subject Representation in Library Catalogues. *Unpublished Dissertation UW- Madison*.
- Overholt, C. (1985). *Gender Role in Development Project: Case for Planner*. West Hartford : CT Kumarian Press, UK.
- Pant, P. R. (1975). *Social Science Research and Thesis writing* (7th ed.). Kathmandu-Nepal: Buddha Publication Pvt. Ltd. , Anamnagar (Buddha Complex), Kathmandu -32, Nepal. Retrieved 2016
- Pasa, R. B. (2017). Technological Intervention in Agriculture Development. (P. Sharma, U. P. Acharya, B. B. Khatri, R. Nepal, P. M. Pradhan, R. Neupane, & S. Kharel, Eds.) *Nepalies Journal of Development and Rural studies, No.14*(No. 1&2), 86. Retrieved 2017
- Rai, D. B. (2017). Vegetable gardening and Marketing in Kirtipur area of Kathmandu. (P. Sharma, U. P. Acharya, B. B. Khatri, R. Nepal, P. M. Pradhan, R. Neupane, & S. Kharel, Eds.) *Nepalese Journal of Development and Rural Studies, No. 14*(No. 1 & 2), 28. Retrieved 2017
- Rai, D. B. (2017). Vegetable Gardening and Marketing in Kirtipur Area of Kathmandu. *Nepalese Journal of Development and Rural Studies, 14* (1&2), 2017, Vol. no. 14 (Issue no. (1&2), 2017), p, 28-23.
- Rijal, S. P. (2017). (Rijal, 2017) Female Ownership of Fixed Assets in Nepal: A Regional prospectiv. *Journal of Geography, Vol.17: 73-82, 2017, 73-93*. Retrieved from <https://www.nepjol.info/index.php/TTP/article/view/19984/16406>
- Ritzer, G. (1992). *Sociological Theory*. New York: McGraw-Hill Inc. .
- Schultz's. (1979). Schultz's Transformation of Traditional Agriculture . In Schultz's, *The Economics of Development and Planning* (p. 100).
- Shrestha, A. K. (2018, January 31). TRENDS OF WOMEN'S CANDIDACY IN NATIONAL ELECTIONS OF NEPAL. *Researcher: A Research Journal of Culture and Society; ISSN 2091-2374, Vol. 3*( No. 3 ), Page: 47-62. doi:<https://doi.org/10.3126/researcher.v3i3.21549>
- UN. (1979). *Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)*. United Nation office of the High commissioner. Retrieved from <https://www.ohchr.org/Documents/ProfessionalInterest/cedaw.pdf>
- UN Women . (2019). [www.asiapacific.unwomen.org](http://www.asiapacific.unwomen.org). Retrieved Jan 27, 2020, from United Nation Women: Asia and the Pacific: <https://asiapacific.unwomen.org>
- UN Women. (1995). *The Beijing Platform for Action Turns 20*. Retrieved from United Nation women ; Entity for Gender Equality and the Employment of Women: <https://beijing20.unwomen.org/en/about>
- UN Women. (2015). *An Analysis of the Constitution of Nepal from Gender Equality and Women's Empowerment Perspective*. Nepal: To contribute to the United Nation's Common Position on the Constitution. UN Women. Kathmandu (unpublished).

- UNDP. (2018). Researching women's political inclusion in the 2017 local elections: Some comments and findings. Nepal, Kathmandu, Nepal.
- UNDP. (2019). *Human Development Report, 2019*. UNDP, New work.
- UNFCO. (2013). *District Profile of Mugu, 2013*. INGO. Nepal: UNFCO, Mid-Western Region office, Nepaljung. Retrieved 2013
- UNHR. (1966, December 16). *International Covenant on Civil and Political Rights (ICCPR)*. Retrieved Feb 1, 2020, from United Nation Human Right (UNHR): <https://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx>
- UNIFEM. (2001). *Annual Report:17*. New York: United Nation Development Fund for Women (UNIFEM).
- United Nation [UN]. (2015). *Transforming our World: The 2030 Agenda for Sustainable development*. Retrieved from <https://sustainabledevelopment.un.org/post2015/transformingourworld>
- WD. (2019). Strengthen Girls' and Women's Political Participation and Decision-Making Power: Facts, Solutions, Case Studies, and Calls to Action. p. 1-8. Nepal.

## APPENDICE

### GANDER-RESPONSIVE FARMING PRACTICES OF SORU RURAL MUNICIPALITY IN MUGU DISTRICT

#### Appendix -I: Survey Questionnaire

Dear respondent,

This is completely a field study work. It does not carry any official record. You are requested to answer the question honestly. The importance of this study depends on your valuable answers. Your privacy will be secured and information you provide does not effect on it. So, please answer the following questions on your knowledge and practice as far as possible.

Name of the respondents :

Contact Number :

Code Number :

Interview Date :

#### Section A: General Information of the Respondents

1. What is your permanent address?
2. How old are you?
3. What is your caste and ethnicity?
4. What is your mother tongue?
5. What is your religion?
6. What is your family occupation?
7. How many members are working outside from the village? And where are they working?
8. What is land holding status of your family?
9. Completed Education?
10. Family members? No.....
11. How many living children do you have?
12. Status of food sufficiency? And sources of food defect?

Food sufficiency status	Response (√)	Supplementary sources of food defect	Response (√)
0-3 Months		Agriculture	
3-6 Months		Business	
6-9 Months		Govt. Job	
9-12 Months		Foreign employment	
More than 12 Months or surplus to sell		Pension	

Othe: .....

#### Section B: GRAP practices related information (objectives no. 1.)

13. Major crops?
14. Types of land?  
(a) Registered (b) not Registered/ lease (c) registered on both (c) other  
And how much land do you have?
15. How do you manage improve seeds for farming?
16. What types of harvesting technology do you applying?
17. Weed Control Practice?

Weed control Practice	Response (√)
by burning plants residues after harvesting	
by grazing animals	
by mechanical weeding	
by crop rotation and inter-cropping practicing	

18. What types of technology do you use for caring the crops/ vegetable?

Traditional/ Modern technology	Function	Response (√)
Pipe irrigation (Sprinkle, Drip)	Irrigation to whole land	
Channel irrigation	Irrigate only plant through water pipe	
Compost fertilizer	utilizing compost manure	
Herbal pesticide (Organic)	Utilize herbs and urine of cattle to crops	

Chemical pesticide	Spray chemical on crop	
Chemical fertilizer	mixed chemical fertilizer on soil	
High value animal husbandry	Cow, goats, sip, horse and buffalo	
Shifting Cultivation	Soil fertility preservation/ weed control	
Transhumance	Soil fertility preservation/ weed control	
Integrated farming	Soil fertility preservation/ weed control	
Tunnel farming	Vegetable production in plastic tunnel	

19. How do you preserve soil fertility? ✓  
(a) fertilization , (b) crops rotation, (c) Intercropping, (d) Tillage
20. Where did you seals your agriculture product?

What types of agro marketing channels do you apply? (circle it **O**)

Marketing channels	Direct	• Farm/ House get
		• Foot path/ on the way
	Non Direct Channels	• Vegetable shop/ Retailers
		• Wholesaler

### Section C : Gender Role In Agriculture (objectives no. 2)

21. Gender role in agriculture? (✓)

Gender Role in Agriculture Production	Female (✓)	Male (✓)
Land Preparation		
Crop Planting		
Weeding		
Applying fertilizers and chemicals,		
Irrigation		
Carrying crop		
harvesting		
collects products		
Protecting crops from animal and birds		
Store preparation and caring		
Seed selection and cleaning		
Sell agriculture product to market		
Food drying. processing and preservation		
Preparation and marketing of dairy products		
vegetable cultivation/ farming		
livestock and poultry raising and seals		
Handicrafts		
Shopkeeper activities		
wage labor (off farm)		
farm employee		
Child care		
Food preparation and cooking		
water collection and sanitation		
Milling grain for home consumption		
Caring of animals		
Fuel supply (i.e. fire wood)		
High prestige work on socio-cultural evidence		

### Section –D

### Problems and Prospect of GRAP related Variables (objectives no. 3)

22. Access and control over the resources and benefits?

Resource and Benefits	Access (✓)		Control (✓)	
	F	M	F	M
<b>Resource</b>				
Land				
Labor				
Financial Capital				
Agriculture tools/ equipment				

Agro inputs; Fertilizer, Pesticide, Improve seeds, tools and equipment etc.				
Organization/ institution				
Education/ Training				
Government subsidies and scheme				
<b>Benefits</b>				
Income				
Incentives				
Quality Education				
Reinvestment decision				
Baying and sealing of agro product (grain, livestock and cash crops)				
Credit and lone facilities				
High value inventory/goods purchase				
Employment				

23. Wage rate in agriculture? (✓)  
(a) Equal wage (b) More than male (c) More than female

24. Decision process in GRAP? (✓)

<b>Only Female</b>	<b>Only Male</b>	<b>Both</b>

25. How much time spends on agriculture activities?

Time (daily Hrs.) Sex	1	2	3	4	5	6	7	8	9	10	11	12	13	14	>14
Male (✓)															
Female (✓)															

26. Basic service accessibility for transformation?

Accessible services	Functions	Response (✓)
Training	Apply modern farming techniques	
Linkage	Supply of agriculture product to market	
Tools repairing center	Agriculture tools repairing/Made	
Collection center	Save value of product	
Agro-processing center	Purifying and value change of the product	
ICTs (Internet/ Broadcasting)	Applying modern technique, knowledge gain and information sharing related to agro farming	

27. When did you take agro-financing services as a grants or lone?

Govt.-Agriculture office	Response (✓)
ADB	
Cooperatives society	
Informal source	
I/NGOs	
Not Access.	

#### Section E :Impact Related Variable

28. Income from Agriculture? Expenditure ..... (Income Rs.) .....

29. Employment opportunity?

- (4) High equality, (3)Equality, (2)Undecided, (1) inequality (0)Negligibly

30. Access to education?

I. Illiterate	SLC/SEE
II. Normal reading and writing	+2/ PCL
III. Class 5	Bachelor
IV. Class 8	Masters
V. Under SEE/SLC	M.Phil. / PhD.

Have you any suggestion to me? Please write!

**On behalf of Surveyor**

Name .....

Time of Questionnaire .....

**On behalf of Respondent**

Name .....

Thank you for your Kindly help.



## Appendix II: Observation Guidelines

Date:	Time:
Venue:	Ward Number:

### 1. Agriculture Development Components

- **Consumption Pattern:**
  - Food, Feed, fiber, fuel etc.
- **Distribution**
  - Transformation, Production, Packaging, distribution, Product development, supply chain management, marketing strategy
- **Transformation**
  - Processing and Marketing strategy, management strategy and equipment
- **Agriculture infrastructure;** - Technology, Accessibility, Marketing, Agriculture inputs, Research & Development

### 2. Socio-cultural Role and Relation

- Cultural norms, values, & Practices
- Social Institution and GRAP
- Educational status
- Food Habit (Ordinary people, child, old age, pregnant women and adolescence or Adult)
- weeding, preparation, cultivation and irrigation, participation and decision making

### 3. Geography and climate components

- Land, Soil, Water, and Forest
- Air, Temperature and climate variation

### 4. Impact of GRAP

- Household earning and daily life activities of local farmers
- Socio-culture integration, Education, Employment, Health, and Participation. of local farmers
- Food Security
- Empowerment of local farmers (especially women's)
  - Descriptive note:
  - Reflective note:
  - Thematic note

### Appendix III: KII Guidelines

Date		Time	
Ward No.		No. of Participants	
Village/ Hamlet		Interviewers	
Targeted respondent for KII	KII Guide		
<b>A. Fir Local people/farmers</b>	<ol style="list-style-type: none"> <li>1) What is the current status of gender in agriculture sectors?</li> <li>2) Why equal participation of gender in agriculture is essential for gender responsive sustainable economic development with social justices?</li> <li>3) What are the major impacts of gender-responsive agriculture development in this village?</li> <li>4) What challenges do you facing in operating GRAP in this village?</li> <li>5) What are the changing social, cultural, economic and political structural factors of this village for GRAP</li> <li>6) Why local people are forcedly involving in substances based agriculture (family-farming system) practices?</li> <li>7) What is the extent of leadership commitment to addressing gender Imbalances through the budget?</li> <li>8) Is the institutional supports are essential for GRAP?</li> <li>9) What are the rural agro-tourism practices are being practices in this village?</li> <li>10) How do you understand about GRAP policy or scheme? H</li> <li>11) How is the role of women at different levels in the budget and expenditure control processes</li> </ol>		
<b>B. For local Governance (NGOs, CBOs, cooperatives, AO, local representative etc.)</b>	<ol style="list-style-type: none"> <li>12) What programmes and project are actively implemented in place with a view to reducing gender inequality in agriculture?</li> <li>13) What are the major challenges for gender equality and social inclusion in agriculture?</li> <li>14) How local stakeholders are planning for Gender Responsive Farming Practices activities?</li> <li>15) How is the status of participation of gender in planning, implementation and monitoring of gender-responsive agriculture development program?</li> <li>16) Is the local government informed gender-responsive agriculture development process (policy, planning, budgeting, implementation and M&amp;E) by policy guidelines and if so, specify....</li> <li>17) Is local government has taken self-imitative of GRAP? Specify....?</li> </ol>		

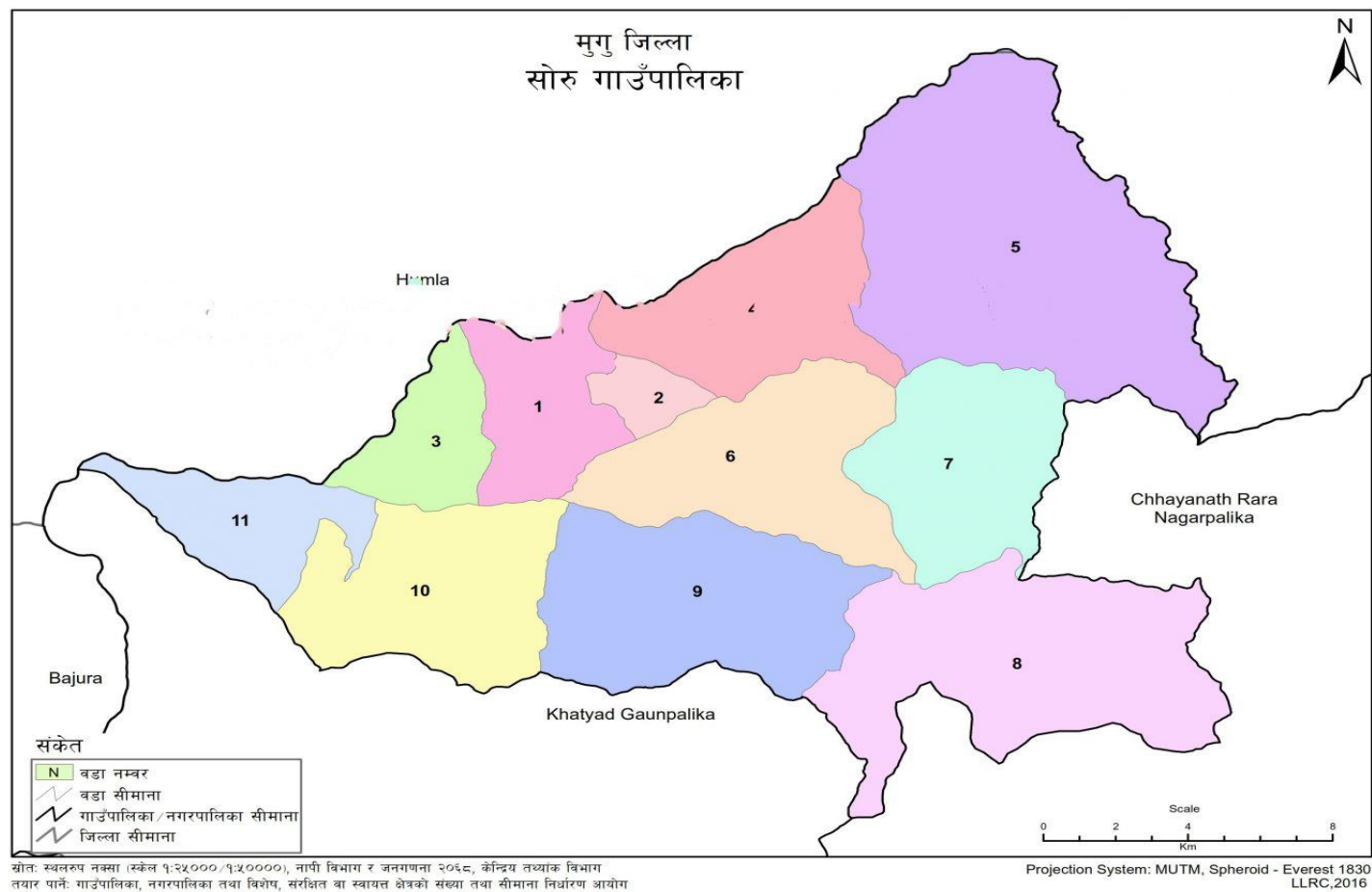
- Descriptive note:
- Reflective note:
- Thematic note

#### Appendix IV: FDG Guidelines

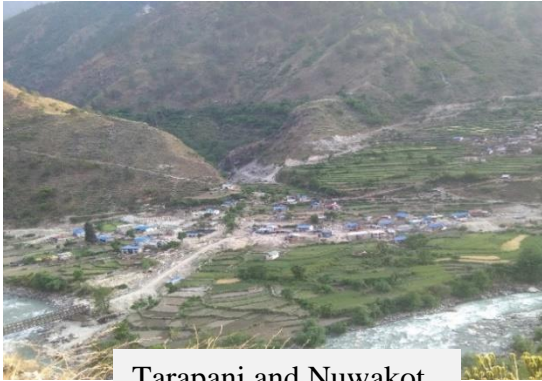
<b>Date</b>		<b>Time</b>	
<b>Ward No.</b>		<b>No. of Participants</b>	
<b>Village/ Hamlet</b>		<b>Interviewer</b>	

- 1) What agro needs and opportunities exist for to increasing women's economic productivity and production in this village?
  - 2) Do you like consult to identifying such needs and opportunities especially in agriculture development in this area?
  - 3) What agriculture development activities have being practices by the initiatives of person, community, CBOs, I/NGO and private agency in this area?
  - 4) What are the main agro product, where you getting more economics benefits?
  - 5) Did you produce off-season agriculture products?
  - 6) Which fertilizer, poeticize, tools and equipment is use in your farming?
  - 7) Is there equal wage for both genders?
  - 8) Are you involving in CBOs i.e. (cooperatives, mother groups, etc)
  - 9) Are there different situation for male and female?
  - 10) What agro the problems faced by the farmers while in farming?
  - 11) What is the other source of income than agriculture?
  - 12) Do you have got any agro incentives from government?
- Descriptive note:
  - Reflective note:
  - Thematic note

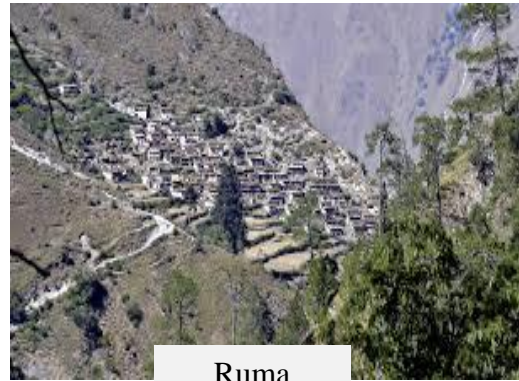
## Appendix IV: Location Map of the Study Area



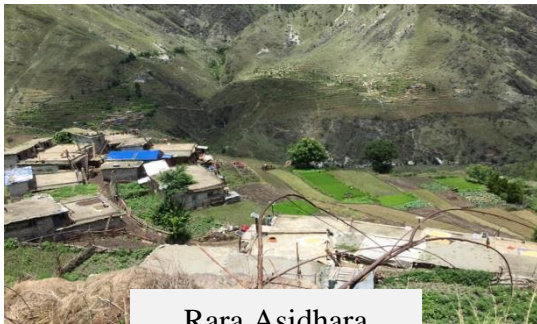
**Appendix V: Glimpses of Field Work**



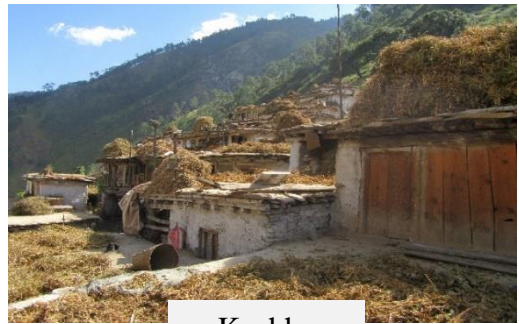
Tarapani and Nuwakot



Ruma



Rara-Asidhara



Kachhe

**Field observation Photos:**



Mrs. Rupa Rokaya oil processing by local technology by "Dunedi"



Weeding paddy



Using greenhouse technology



Data collection by Mrs. Maya Khadha