

CHAPTER- ONE

INTRODUCTION

1.1 Background of the Study

Nepal is a small country situated between two large countries China and India with an area of 1, 47,181 sq. km. It extends from 26⁰ 22' N to 30⁰ 27' N in latitude and from 80⁰ 4' E to 88⁰ 12' E in longitude. As to its east west length, it runs for about 885 km. right from Mechi river in the east to the Mahakali river in the west. While its north-south breadth with an average of 193 km. varies from the maximum of 241 km. in the west to 145 km. in the middle.

This Study Report is based on fieldwork research and it executes the academic research in the Ratanpur and Dandajheri Village Development Committees in the northern belt from the Narayangadh-Butwal high way of Nawalparasi district of Nepal. This study has focused on assessing the demographic and socio-economic feature, agriculture and bio-diversity, health and nutrition, and indigenous pattern of the study areas to explore the social composition, social value, and systems of society so that the findings of study could be beneficial to execute the program successfully in the areas. For the success of the study and to achieve its objectives in real sense, the in-depth knowledge about social composition, social/cultural value and system of society, the societal indigenous knowledge, agricultural and livelihoods pattern of society are crucial and key for success. Only then the development efforts would benefit the poor and unprivileged people and shroud their voices, and their hopes. Thus, this study has aimed to explore information from the local community reaching in its inner layer of reality.

The research district is Nawalparasi, which belongs to the intermediate category on overall development index ranking in 36th position in overall development index of Nepal. Going through the health and development index followed by other districts, Nawalparasi is ranked 35th and has positioned in an intermediate category. Overall literacy of the district is 53.25% and falls in intermediate category, where as female literacy is 38.02%. As per habits of toilet using, 31.03% people use toilets and it is also ranked intermediate category comparing to other districts (ICIMOD, 2003).

Selected sites consist of two VCDs, which are Ratanpur and Dandajheri of Nawalparasi District.

1.2 Statement of the Problems

Nepal is a Himalayan country. It is predominantly an agricultural country. About 40% GDP comes from agriculture and about 80% of the population earns their living from agriculture. About 38% of the population is estimated to be living below the poverty line (UNDP, 2002). Land of Nepal rises from low altitude to high altitude, which indicates the variation in climate. Along with variation in climate, biodiversity, ethnic and cultural diversity and different socio-economic structures are recorded. Considering these facts, the present study is an attempt to provide a systematic analysis of socio-economic status of the rural people of the two VDCs, namely, Dandajheri and Ratanpur of Nawalparasi district. No particular study has been made yet regarding the socio-economic status the people of these two VDCs. Therefore, this study can be helpful to understand the real picture of socio-economic status the people of this selected area. Mainly the problems have been concerned with the following questions:

1. How is the ethnicity and caste diversity of the study area?
2. How is the economic and educational status of the people of study area?
3. What is the marital and health status of the people?

1.3 Objectives of the Study

The main objective of this study is to analyze the socio- economic status of the people of this area. The specific objectives of this study are as follows:

-) To explore the social economic system and condition of the people living in these VDCs
-) To get information of the situation of health, sanitation, nutrition and education of rural people.

1.4 Rationale of the Study

Any fieldwork is targeted to provide a real picture of the field. This study aims at looking into the socio-economic status of the rural people so as to provide a clear picture of their situation. This study has revealed the ethnic-diversity, biodiversity,

and variation in socio-economic status. Marginalized and back warded communities have been found as landless communities. Majority of the Households (referred to as HHs henceforth) are found to be involved in daily wage labor due to the higher number of landless migrants. Gender discrimination and imbalances are prevalent in the study areas. Women have the intensive work burden and socio-cultural stereotype are assigned to women. Thus, such facts have been considered as the issues of the study and also hoped that they will fulfill the interest of the researcher.

1.5 Limitations of the Study

The major limitation of the study was the time boundary. Besides this, researcher faced some practical problems during the research period due to arm-conflicting groups in Terai because they were not satisfied with the high interest rate of NIRDHAN BANK and the researcher was along with one of the staff of this bank. Some other factors hampering in the process were as follows:

-) Farmers had the limitation of time and work burden of agricultural household activities, and also they had to go for the wage labors to maintain their expenses. Thus, they became unable to separate sufficient time to involve in the researcher's activities.
-) Different strike, national holidays etc have also hampered fieldwork at the time of field research.
-) Very limited time available to process and analyze the collected information.

1.6 Significance of the Study

Since this study is related to identify the social-composition of the study areas, agricultural and ethnic diversity, health condition, and nutrition of the people, and importance and rationale of indigenous knowledge pattern in the life of local settlers, it will play important roles to launch many development programmes. It will help to overcome the difficulties faced by the people of the selected areas.

This study will help to

-) Address the poverty related problems and launch suitable programmes.
-) Raise awareness on discrimination against women as second sex in the community.

-) Aware people about health and run health campaign against communicable diseases in the study areas.
-) Launch programmes for providing training and ideas to strengthen agricultural pattern to increase the productivity by the transformation of traditional agriculture system.
-) Enlighten and convince the new generation about the importance of indigenous knowledge to protect our environment, ecology and to run livelihood.

1.7 Organization of the Study

This thesis is divided into five chapters. The first chapter deals with the introduction of the study and the second chapter deals relevant literature review. The third chapter deals with research methodology, the research tools, and techniques used in the study. The chapter four focused on analysis and interpretation. The chapter five has accounted summary, conclusion, and recommendation. Finally, this dissertation has ended with the references and appendix.

CHAPTER-TWO

LITERATURE REVIEW

The study of socio-economic status is not a new conception in Nepal. Many researchers have conducted from the side of government and INGOs / NGOs for the formulation and implementation of various plans. But the people of different places have different socio-economic status. It varies according to geographical condition and the reach of the government for the development of the region as well as the local politics. Therefore, the finding of a research of a place certainly differs that of other place. But the theoretical review in context of research provides broad spectrum in the research work. Thus, literature review is one of the important parts of any research work.

For this, different books, journals, websites, previous research works, reports, articles, plans and policies, television programmes, other published and unpublished documents related to the subject have been reviewed. Since this study is related to, socio-economic status here is a short discussion related to such fields, which are extracted, from the reference books and previous researches. I would like to kindly remind that the maximum findings in the study are based on the researcher's field work and previous research works, books, reports, articles etc have taken as guide lines to achieve the goals.

2.1 Theoretical Review

Nepal is a Himalayan agricultural country. Agriculture is the major source of economy of Nepal. About 81% of Nepalese citizen depend on agriculture for their livelihood. With a per capita income of about US\$ 250, Nepal is one of the poorest countries in the world. About 49% of its population in rural areas and 23% in urban area lie below the national poverty line. (World Bank, 2003). About 21% of the total land of Nepal is under cultivation. A large number of poor families have small land over two third of rural households own less than a hector of land (APP, 1995; cited in Lekhak, 2005). In the past, Nepal was known as an agricultural country exporting food grains. However, within past three decades, mainly after 1970, status of Nepal has changed from food grain exporting to food grain deficit country (FAO, 2001;

cited in Lekhak, 2005). FAO bulletin of statistics 2001 indicates that in the last decade rate of growth in the agricultural production was 2.6 % per annum, which is slightly above the current rate of production growth 2.25 %.As a result the contribution of agriculture sector has been gradually decreasing in the recent year. The subsistence nature of agriculture is slowly vanishing in Nepal (Lekhak, 2005).Agricultural production in Nepal especially in hills and mountains is not enough to feed the entire local households for more than six months in a year . In order to solve such problems it is necessary to have transformation of traditional system of agriculture into modern scientific system.

Another part of the issue is the situation of poverty in Nepal. Since poverty is the main problem of the third world, Nepal is not an exception to this. This word indicates the absence of basic needs for human. Traditional life style, diseases, hunger, malnutrition, lack of sanitation and illiteracy are the major components of poverty. Following definitions clarify the word "poverty."

"Poverty is more than income or human development, it is also Vulnerability and lack of voice, power and representation" World Bank (VDR,2000-2001, Cited in Sharma & Sharma,2005) "Poverty is a multidimensional concept comprising the notion of exclusion, difficult or denied access to resources, choices and services, deprivation basic rights and security and powerlessness. In general, the poor people whose great potential to contribute to progress and growth of the nation is not utilized. This example in Kenya tells what the poverty really is "Don't ask me what poverty is because you have met it outside my house. Look at the house and count the number of holes. Look at the utensils and clothes I am wearing. Look at everything and write what you see. What you see is poverty."

Increasing human population associated with hunger and misery lead the hill people to migrate to Terai, largely after the eradication of malaria. This resulted in a tremendous increase in population of Terai but decrease in population of hills. In 1952, Terai had about 35 % of population of the country, which rose to 48.4 % in 2001.This-increased population in Terai, put a pressure in destruction of forest for the fulfillment of their basic needs. Product from the forest is used for construction, fuel wood, and cash earning purposes. Such activities also result the loss of bio-diversity,

soil erosion, flooding and decline in ground water. There is also an inter-linkage between poverty and environmental degradation.

When we talk about theories of development, theory of economic development comes to be involved automatically. Adam Smith had imagined a system that is not in the control of the state. It was published through 'Wealth of Nation' in 1776. Ricardo had postulated model of development stressing on marginal utilization or saving system. Malthus showed the relation with population in the context of development. However, later in 1950, the definition of development was rather politically polarized through lots of colonies that have become independent. They did not get infrastructure of development in order to keep neo-states in their influenced group, former USSR emphasized on socialistic mode of approach. However, the base fact was that both schools did not pay proper attention on newly independent states. After that, various theories were postulated on development. They were like modernization theory, dependence theory, people centered theory etc.

But past theory could not accomplish the aspiration of needy people. In order to uplift the pitiable condition of the rural and marginalized group, they must be made to involve in the development work directly or indirectly. In the context of traditional agricultural system, it is necessary to have transformation of this system into modern scientific system.

The knowledge, which is not taught formally but perceived in a particular context at a certain stage of the perceiver's consciousness that grows in the world of local events, is called indigenous knowledge (Uprety 1998). The technology based on it is called Indigenous Technology. It is the national heritage of the country. The nature of such knowledge is labor intensive and it utilizes the local resources. In fact, much such knowledge is found to be mixed with the local culture and art in such a way that it is difficult to draw a line of demarcation between them. This is unique feature of such knowledge that is rarely found in modern technology. Wide use of such knowledge is also found to be essential for the livelihood of the rural people but it is to be improved and have to be connected directly or indirectly with the modern technology.

2.2 Reviews of the Previous Studies done in the Neighborhood

Many researches have been conducted to uplift the economical condition of poor, unprivileged and the rural people by the side of the government and different

organizations. Most of such efforts are found as formal paper work. They could not meet their goals. Such efforts have been successful to formulate various plans but the implementation and monitoring sectors are found to be very weak. The researcher has not found similar fieldwork done for the same purpose targeting this particular area. Certainly, this study will help to identify the real picture of socio-economic status of the people of the selected area. Some fieldworks done for other purposes in the neighboring VDCs are taken as guidelines.

NIRDHAN bank distributes loan to the rural and back warded people by making several groups each with 7-10 members. For this NIRDHAN (according to the office record, 2008) conducted a fieldwork survey to identify the economical condition of the habitant of Gaidakot VDC ward no.3 and Kotathar VDC. This survey report shows that the average family sizes of this ward and VDC were 6.2 and 6.85 respectively. About 6.5% of HHs of Gaidakot-3 was found to be involved in agriculture as their major occupation and that was found 69.6% in Kothar. Regarding the literacy status by sex, average of 46.8% of female in Gaidakot and 44.3% in Kotathar were found literate and the remaining percent was that of male. Regarding the involvement of the people in the group, 42.6% HHs in Kothar and 41.8% HHs in Gaidakot were involved in the groups like RRN, JICA, NIRDHAN, WDO, etc.

A field research report (Humagain, 2008) mentioned that 30.3% and 40.5% of HHs use toilets in Kotathar and Gaidakot respectively. This data clears that the people of neighboring VDCs are not conscious regarding this matter. Similarly his fieldwork shows that 94.3% HHs in Kotathar and 89.1% HHs in Gaidakot are involved in alcoholism and smoking. The survey report shows that the people from poor economic condition and lower economic status use more alcohol and tobacco products. In the same report, it was mentioned that 73.6% HHs and 63.75% HHs have been practicing immunization in Kotathar and Gaidakot respectively.

Though many researches were conducted regarding socio-economic status, no one has separately dealt with these two VDCs. The study of socio-economic status of this particular location may significantly help to get the real picture and as well as to formulate different development plans and also to implement them.

CHAPTER-THREE

RESEARCH METHODOLOGY

3.1 Population

There are 76 HHs in Dandajheri and 108 HHs in Ratanpur (total 182 HHs in the study area). According to census 2008 total population of these two VDCs is 1235. Out of 1235 the population of Dandajheri is 571 and that of Ratanpur is 604.

3.2 Sample Size

Out of the total 1235 people of 182 HHs, a sample of 182 people were sampled for the study. The total of 1235 people was taken as the universe and Simple Random Sampling Technique (among adults who) was followed for the selection of samples.

3.3 Rationale of the Selection of the Study Area

Dandajheri and Ratanpur two VDCs were chosen for the study. These two VDCs lie in Nawalparasi district of Lumbini zone. These two rural VDCs Ratanpur and Dandajheri were selected for the study as they are easily accessible and heterogeneous in socio-economic and cultural structure and the zone belonging to the site being the own zone of the researcher. Researcher's own brother is working in NIRDHAN as field supervisor of this district (branch office of Nirdhan Utthan Bank) who has to distribute loan to local inhabitants of the few VDCs by making several groups as his official duty. This helped researcher to visit the site and to take interview and also to distribute the questionnaires in the same groups.

3.4. Research Design

This dissertation is concerned on the socioeconomic status of the rural people. It is difficult to explore the cultural practices with the statistical parameters. For this study, a descriptive research design has been followed. The data that are not quantifiable have explained literally. Analysis of the data has done by generating the tables of averages and percentages. Some data have been represented in bar graphs and pie charts.

3.5 Nature and Sources of Data

Qualitative and quantitative data have been used for this study. The primary data were collected in the field through various data collection methods. The primary data is not enough to explain comparatively presentation, it necessary as well as helpful to take secondary data for the perfect presentation. Hence such data were collected from the secondary sources like government and non-government officials, official documents of bank, published booklets, CBS, VDC records, researches and relevant books. Following techniques were used for data collection.

3.5.1 Structured Questionnaires

Keeping in view of the objectives, detailed-structured questionnaires were designed to gather different types of primary data from the respondents in the areas of social/cultural information, information related to family health, food security, health and sanitation, nutrition, farming and animal husbandry and general information about households from the study areas. Questionnaires were administered in a total number of 182 people to collect the quantitative and qualitative information (see annex for model questionnaire)

3.5.2. Key Informant Interviews

To collect further information and data, interviews with open-ended questions were made with teachers, ex-chair person of VDC, representative of the respective ward and elder person who were taken as key informants.

3.5.3 Observation

Direct observation method has been used to get the relevant information for the study. It has been conducted to get the information about agriculture practice, biodiversity and the process of making suttho and alcohol, which helped to know the related mechanism.

3.6 Data Processing and Analysis

The data obtained from the survey were converted into tables and percentages. The averages and percentages of tabulated data were represented by pie chart and bar graphs. No analytical statistical tools and techniques are utilized for data analysis.

CHAPTER-FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Information

The data analysis and interpretation has been presented in four parts namely demographic, and socio-economic feature, agriculture and bio-diversity, health and nutrition and indigenous knowledge. These four categories of information have covered the ecological condition, demography, economical conditions, situation of bio-resources, health, and nutrition.

The study areas have divers and complex agro-environmental and physiographic variations, ranging from low altitude to mid altitude, tropical to subtropical climate, irrigated to rain fed upland areas. Multi-cultural, multiethnic composition and diverse economic variation are the major characteristic features of the study area. The detail description of these variations has presented in tables.

The table 4.1 represents the overview of households and the VDCs covered by the study, which shows that Ratanpur VDC has larger number of population than Dandajheri VDC.

Table 4.1: Overview of Households (HHs)

S.N	VDC	Total Pop (2058)	HHs	Average Family Size
1	Dandajheri	571	78	7.32
2	Ratanpur	664	104	6.85
	Total	1235	182	7.09

Population Census, 2008

4.1.1 Demographic and Socio-economic Profile of the Study Area

Local culture, norms, value and system as well as employment opportunities, resources available in the communities, level of education, local political situation etc. determine socio-economic condition and demographic situation of rural communities. These factors have played important role in the study areas too. The detail descriptions of the demographic and socio-economic features of the study area are presented on the following section.

4.1.1.1 Population Composition

The population composition of the study area has been presented in the table 4.2. In the study area, out of 1235 population of 182 households (HHs) studied, 49.4% are male and remaining 50.6% female. The male to female ratio is 1:1.024. The total percentage of female in Ratanpur is higher (50.8%) as compared to Dandajheri (50.4%). Average family size of the studied HHs is 7.1, which are 1.5 percent higher than national average of 5.6 (CBS, 2001). Higher number of Children¹ has observed in Ratanpur followed by Dandajheri. [Figure 4.1]

Figure 4.1: Distribution of Population by Sex of two VDC

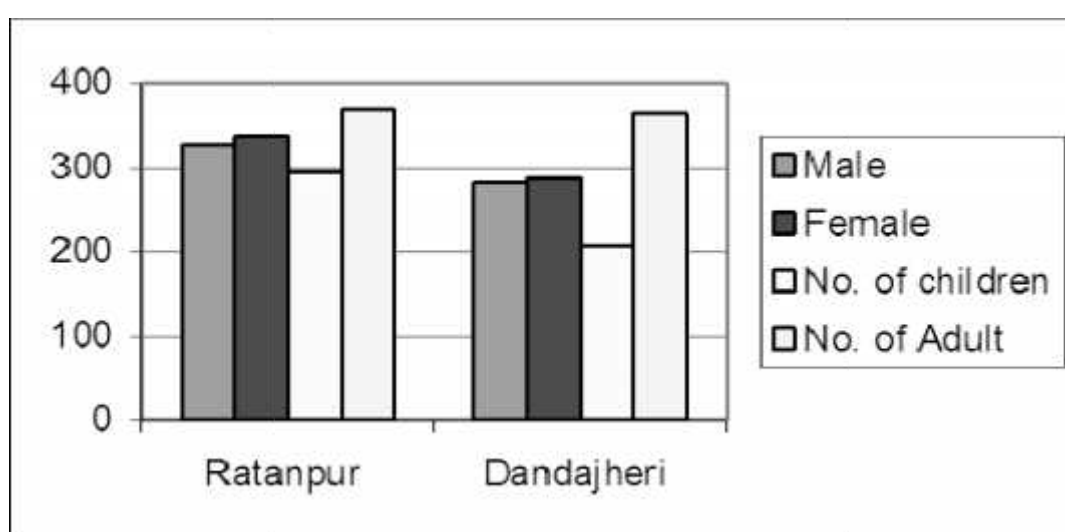


Table 4.2: Population Composition of Study Area

Study Areas (VDCs)	Population Composition						No. of children	No. of Adult	Average family size
	Male		Female		Total				
	No. of Pop.	%	No. of Pop.	%	HHs Pop.	%			
Ratanpur (104 HHs)	327	49.2	337	50.8	664	100	295	369	6.85
Dandajheri (78HHs)	283	49.5	288	50.4	571	100	207	364	7.32
Sub total	610	49.4	625	50.6	1235	100	502	733	7.1

Source: Field Survey, 2008

¹ 12 years and above is defined as economically active population and below 12 years is defined as children

4.1.1.2 Ethnicity and Caste Diversity

Study area has been composed of multi-caste/ethnic communities. Major caste/ethnic group recorded in the study area are Magar, Gurung, Tamang, Brahmin, Bhhetri, Newar, Damai, Kami, Sarki, Darai, Kumal, Bhujel and others. All these ethnic groups/castes are categorized into five groups: Brahmin/Chherti (B/C), Newar (N), Gurung/Magar/Tamang (G/M/T), Damai/Kami/Sarki² (Untouchable), and Darai/Kumal/Bhujel (D/K/B). Table three shows that (G/M/T) is the most dominant caste group (88.9%) in the study area followed by Brahmin/Chherti (4.3%), Untouchable group Damai/Kami/Sarki (4.96%), Darai/Kumal/ Bhujel (0.6%) and Newar (0.58%) respectively. This ethnic/caste group belongs to the reported 33 ethnic groups of Terai and 33 ethnic groups of hills and mountains (CBS, 1998). Figure 4.2 shows the caste diversity of the study areas.

Figure 4.2: Ethnic/Caste Diversity

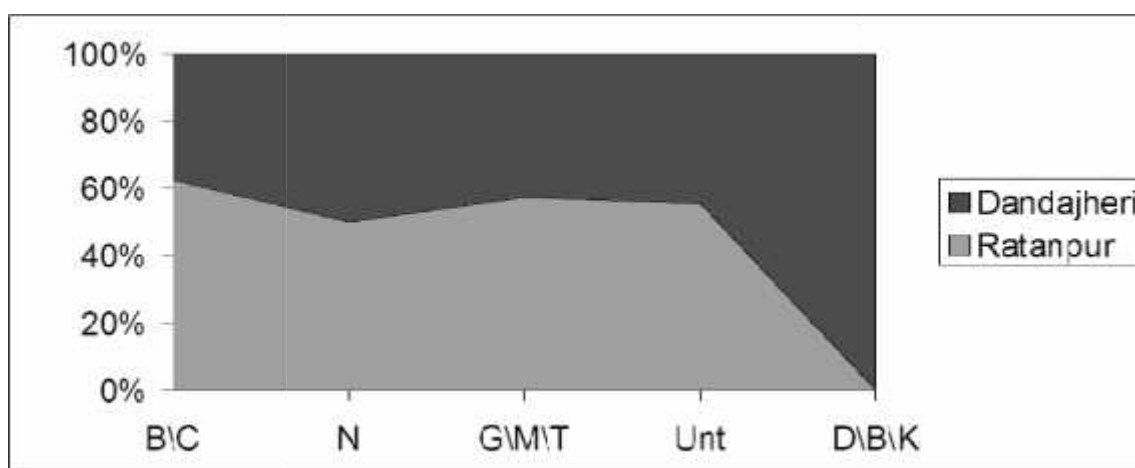


Table 4.3: Population Composition of the Study Area by Ethnicity/Caste

Study Area	Ethnic Composition										Total HHs
	B/C		N		G/M/T		Untouchable		D/K/B		
	No. of HHs	%	No. of HHs	%	No. of HHs	%	No. of HHs	%	No. of HHs	%	
Ratanpur	5	4.8	1	0.96	93	89.4	5	4.8			104
Dandajheri	3	3.8	1	1.2	69	88.4	4	5.13	1	1.2	78
Total	8	4.3	2	0.58	162	88.9	9	4.96	1	0.6	182

Source: Field Survey, 2008

²Here the words Damai, Kami and Sarki (Untouchable) are used in the caste/ethnic categorization only to make the report easily understandable (to avoid the confusion) because of the familiarity of these words. There is not any intention to undermine this marginal group of people. We should highly respect their pride and dignity and suggest that the word “Nepali” is more appropriate to represent this group of people as they use this term

4.1.2 Economic Condition

The economic condition of the surveyed HHs has been presented in the table 4.4. Out of 182 HHs responded for the resource endowment, 51% HHs belongs to medium category of economic class, where as 32.2% were under poor category. Only 15.3% HHs belongs to rich category. The large proportion of HHs (41.2%) belongs to poor economic condition Dandajheri than that in Ratanpur where 41.2% and 23.2% respectively are in poor economic condition.

Table 4.4: Household Composition of Study Area by Economic Condition

Study area	Rich		Medium		Poor		Total	
	No. of HHs	%	No. of HHs	%	No. of HHs	%	No. of HHs	%
Ratanpur	16	15.3	64	61.5	24	23.2	104	100
Dandajheri	12	15.3	34	43.5	32	41.2	78	100
Total	28	15.3	98	51	56	32.2	345	100

Source: Field Survey, 2008

The larger percentage (61.5%) of HHs in Ratanpur is constituted from medium economic condition whereas only 43.5% of this category is in Dandajheri. Similarly, only 15.3% of HHs of each VDC belongs to rich category. The farmers during the well-being ranking exercise define the indicators for each category. The indicators they use to categorize the economic condition are size and quality of land holding, sources of income, off-farm jobs, quality of houses, occupational and educational status etc. From the PRA it is revealed that about 15.3% of the total population belongs to rich category, 51% to medium, and 32.2% to poor categories as a whole.

4.1.3 Sources of Income

Table 4.5 shows that 14.5% HHs go for wage labor to maintain their livelihoods as a major off-farm source of income on two VDCs of Nawalparasi, whereas high labor 19.86% HHs is in Dandajheri and low labor 8.84% HHs in Ratanpur. The cause of higher percentage of HHs wage labor in Dandajheri was reported due to the higher number of land less migrants and less capabilities to look for the other sources of opportunities. HHs engaged in the government and private services has been found 18% of the total HHs of Ratanpur and that is found 13.2% in Dandajheri.

Table 4.5: Sources of Off-farm Cash Income

S.N.	Sources	Ratanpur HHs	Danaher HHs	Total coverage HHs (290)	Percentage
1	Private service	14	12	26	8.97
2	Government	11	9	20	6.9
3	Outside country	30	13	43	14.85
4	Weaving/knitting	37	21	58	20
5	Labor work	12	30	42	14.5
6	Alcohol	30	9	39	13.5
7	Business	3	2	5	1.7
8	Furniture	2	5	7	2.5
9	Sothi		50	50	17.25
Total		139	151	290	100

Source: Field Survey, 2008

4.1.4 Occupation

According to the multiple response of HHs distribution of the study area by occupation is presented in the Table 6. The huge majority of respondents (78.8% in Ratanpur and 60.2% in Dandajheri) have adopted agriculture as main occupation followed by other occupations measures (17.1% and 22.7% respectively). Only 3.7% in Ratanpur and 3.6% in Dandajheri are involved in service as an additional occupation, other occupations include outside country, wage labor, business, blacksmith, furniture making, weaving and knitting, making alcohol, bamboos work

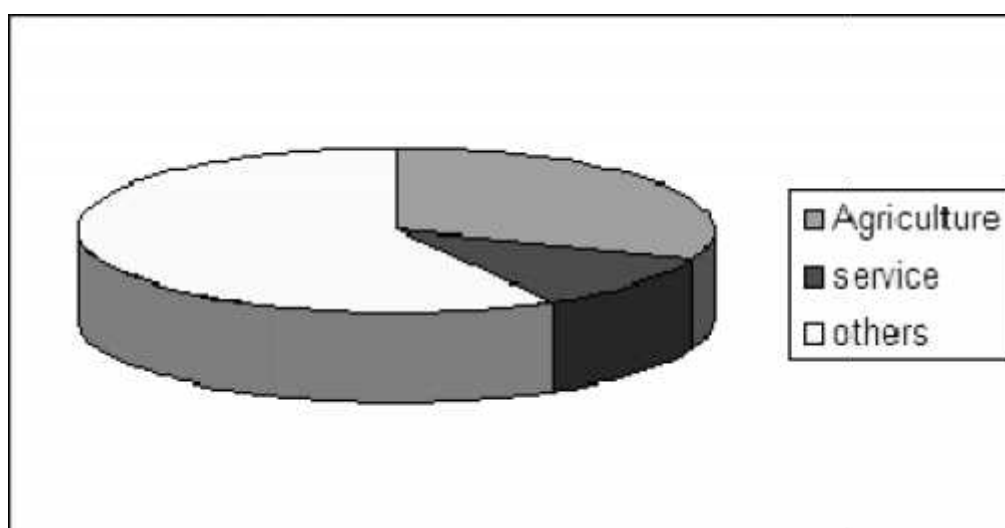
and sutto etc (Table 4.5). Many HHs are involved in more than one occupation. It is revealed that people of Dandajheri has more opportunities to involve in occupations other than agriculture. The reason of involvement of less number of people in agriculture is the presence of higher number of land less migrants.

Table 4.6: Household Composition of Study Area by Major Occupations

Study Area	Main Occupations							
	Agriculture		Service		Others		Total	
	No. of Pop	%	No. of Pop	%	No. of Pop	%	No. of Pop	%
Ratanpur	82	78.8	25	3.7	114	17.1	664	100
Dandajheri	47	60.2	21	3.6	130	22.7	571	100
Total	129	69.5	46	3.65	244	19.9	1235	100

Source: Field Survey, 2008

Figure 4.3: Household composition of study area by major occupations



4.1.5 Educational Status

The following table shows that the population composition of study area by educational status. The percentage of illiterate ratio has been ranging from 38.2% to 40% within two VDCs. The percentage of illiterate people at two VDCs is 39.1% whereas it is 35.7%, (having formal education, class 1-5 and adult education), 21.2% people attended 6-10 class and just 3.9% population have passed S.L.C. and above degree (university degree). The literacy situation is better in Ratanpur (37.9%) than that of Dandajheri (33.6%). Between 17.4% to 25%, people have got formal education from 6-10 class within two VDCs (Table 7). Gender differences are more important factor to create unequal access to education in rural Nepal (NSAC, 1998).

Table 4.7: Population Composition of Study Area by Educational Status

Study Area	Educational Status								
	Illiterate		Literate, 1-5 class, adult education		6-10 class		Over S.L.C.		Total Population of 182 HHs
	No. of pop	%	No. of pop	%	No. of pop	%	No. of pop	%	
Ratanpur	265	40	252	37.9	116	17.4	31	4.66	664
Dandajheri	218	38.2	192	33.6	143	25	18	3.15	571
Total	383	39.1	444	35.7	259	21.2	49	3.90	1235

Source: Field Survey, 2008

Figure 4.4: Literacy Status by Sex

Table 4.8: Literacy Status of Study Area

Study Area	Literacy Status By Sex				
	Female		Male		Total Literate pop.
	No. of pop	Average %	No. of pop	Average%	
Ratanpur	189	47.3	210	52.7	399
Dandajheri	159	45.04	194	54.9	353
Total	348	46.17	404	53.8	752

Source: Field Survey, 2008

4.1.6 Involvement in Group

Table 4.9 shows the involvement of respondents in the study area in various groups. It is found that 50.4% involved in various groups and supported by different development organizations like RRN, JICA, NIRADHAN(now it is called Nirdhan Utthan Bank), WDO etc. whereas 49.6% people are not involved in these groups. Mainly women are the focus of majority of these organizations. Therefore, women groups are also equally reported in the study area. Performance of such women groups have been found mixed, ranging from most successful to passive. Higher percentage (70.1%) of people in Ratanpur involved in groups whereas in Dandajheri 30.7% are involved in groups. Most of the groups are going to be dead and passiveness. The main reason of such state has been attributed to the discontinuation and irresponsibility of many development organizations.

Table 9: Involvement in Different Groups

Study Area (VDCs)	Involved in Groups		Not Involved in Groups		Total	
	No. of HHs	%	No. of HHs	%	No.	%
Ratanpur	73	70.1	31	29.9	104	100
Dandajheri	24	30.7	54	69.3	78	100
Total	97	50.4	85	49.6	182	100

Source: Field Survey, 2008

4.1.7 Gender Situation

Study revealed gender concern is still an external concept to the majority of HHs. Equity concern is very much influenced and determined by the cultural, ethnic and educational (awareness) by backgrounds. It is observed that women were facing several problems to actively involve in development process like extremely busy in household chores, prohibition or not support or lack of encouragement from the family, lack of information available. Women from the Mongolian ethnic groups are found to be more active and more supported by family to participate in development activities. The main reasons cited for such participation is low or no control from the family. It is easier for unmarried women to participate than to married women. In some case, women are found physically participating in development activities but the decision on whether to participate or not and withdrawal from the involvement is under the influence of male members. Specifically, this situation is observed more in

the higher caste Brahmin and Chherti families. Mongolian male members of the family are found supportive to promote participation of their female counterpart. The level of decision making among the female members is still weak as they repeatedly cited to ask their husbands to decide some things. It has been reported that generally majority of the male members take many decisions on their own without consultation with their wives whereas female members consult even for minor decisions like to sell few KGs of food grains. Majority of women independently decide for cooking items and menus. Control-over of the resources mainly remains within the domain of male members of the family whereas access to resources remains with both sexes of the family in many cases.

4.1.8 Land Holding

The household composition of the study areas has been presented in the Table 4.10, which shows that 3.8% households in Dandajheri and 1.9% household in Ratanpur are landless. Similarly, in Ratanpur and Dandajheri, 21.1% and 37.1% households respectively have less than 5 ropani lands. Likewise Ratanpur, and Dandajheri where 61.5% and 43.5% households respectively have five to twenty ropani land. More than twenty ropani land holding HHs are in Ratanpur (15.3%) and Dandajheri (15.3%) (Table10). PRA record shows that more people from the backward communities (Damai, Kami, Bhujel) are landless. The quality of land ranges from irrigated to non-irrigated pakho. Mainly marginal group of people are holding low quality and inexpensive and less fertile pakho and non-irrigated land whereas rich and medium categories of people are holding best quality land (more fertile, irrigated Besi land) in the study area. Figure 4.5 shows household composition of the study area by land holding.

Figure 4.5: Household Composition of the Study Area by Land Holding

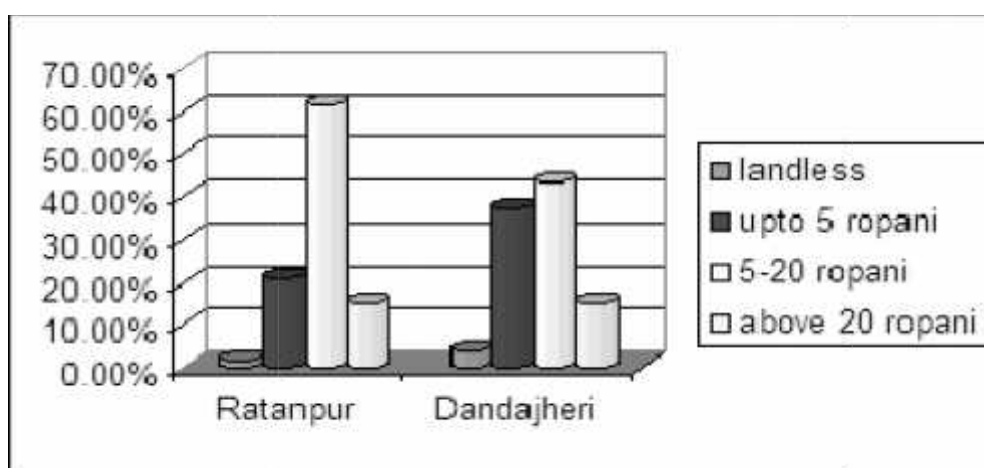


Table 4.10: Household Composition of the Study Area by Land Holding

District	Study Areas (VDCs)	Landless		Less than 5 Ropeni		5-20 Ropeni		More than 20 Ropeni		Total
		No. of HHs	%	No. of HHs	%	No. of HHs	%	No. of HHs	%	
Nawalparasi	Ratanpur	2	1.9	22	21.1	64	61.5	16	15.3	104
	Dandajheri	3	3.8	29	37.1	34	43.5	12	15.3	78
	Total	5	2.85	51	29.1	98	52	28	15.3	182

Source: VDC Record, 2008

4.2 Agricultural and Bio-diversity

4.2.1 Situation of Bio-resources Management and Agricultural Diversity

Having diverse and complex agro-environmental and physiographic variations in the study area diverse varieties of crops, vegetables, and fruits have been reported during the study period. Table 4.11 shows the species diversification of study areas.

Table 4.11: Plant Species Diversity in the Study Area

S.N.	Crops	No. of Types	No. of Varieties
1	Cereals	6	32
2	Pulses	6	6
3	Oilseed	3	4
4	Annual vegetables	22	71
5	Perennial vegetables	6	18
6	Fruits	20	31
7	Fodder trees	30	30
8	Other trees	18	18
9	Spices	6	7
10	Medicinal plants	102	102
11	Fodder grasses	7	7

Source: 1999 PRN

Farmers in the study area have their own strategies and mechanisms to maintain and develop their agricultural and bio-resources. In general, more plant diversity is recorded in the HHs of higher economic strata. It is revealed that the plant diversity was directly related to the types of occupations and economic conditions of the HHs

Table 4.12: Major Vegetables Grown in the Study Area

S.N	Vegetables	Ratanpur		Dandajheri	
		No. of HHs	%	No of HHs	%
1	Cauliflower	10	9.6	11	14.1
2	Tomato	10	9.6	14	17.9
3	Chilli	24	23.07	60	76.9
4	Pumpkin	42	40.3	64	82.0
5	Raddish	22	21.1	28	35.8
6	Spinach	38	36.5	39	50.0
7	Potato	71	68.1	30	38.4
8	garlic	-	-	11	14.10
Total HHs		104		78	

Source: Field Survey, 2008

The situation of bio-diversity has been recorded by Household survey in two VDCs (182 household). It was recorded that a huge majority (97.3%) of the households grow maize followed by wheat and buckwheat (figure 4.5). Regarding the vegetables grown, more than 80% of surveyed households have reported to have grown vegetables like pumpkin, spinach, radish and broadleaf mustard. Other commonly grown vegetable are potato, chilly, beans, etc. in total, different types of vegetables are recorded during the study. Similarly, majority of households are found to be growing different types of fruit crops and mostly they grow banana, orange, guava and lemon followed by papaya, pineapple, peach and mango. Even facing the problems of market and water scarcity, farmers are growing variety of vegetables and fruits in their kitchen gardens. In case of cereals and vegetables more varieties diversity is recorded in Ratanpur and Dandajheri.

Figure 4.6: Major Crops

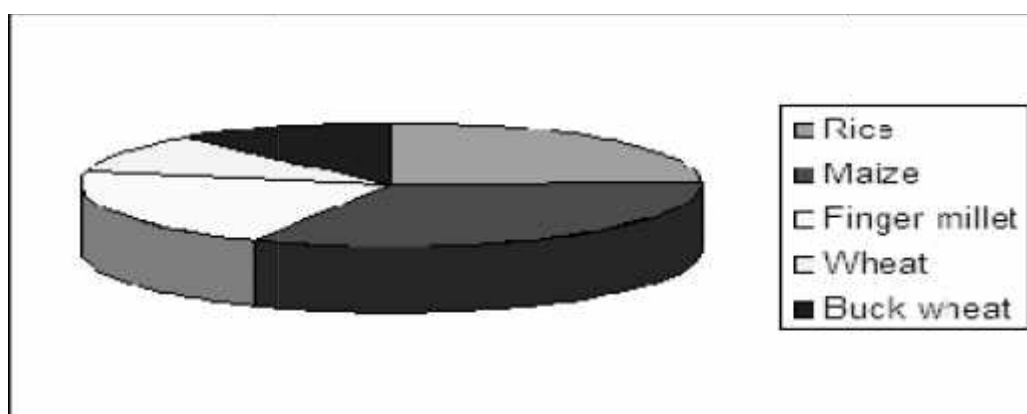


Table 13: Major Food Crops Grown in the Study Area

S.N.	Crops	Ratanpur		Dandajheri		Total	
		No. of HHs	%	No. of HHs	%	No. of HHs	Average coverage %
1	Rice	76	73.0	57	73	227	73
2	Maize	104	100	77	98.7	336	97.3
3	Finger millet	52	50	57	73.0	236	61.5
4	Wheat	28	26.9	28	35.8	100	31.35
5	Buck wheat	14	13.4	43	55.1	114	34.25

Source: Field Survey, 2008

Table 4.13 shows that vast majorities of farmers have been growing rice and maize crops in their land followed by millets, wheat and buckwheat crop during winter season. Likewise, pumpkin, broadleaf mustard, gourds, potato, and tomato are found to be more commonly grown vegetables. Study shows that total diversification in the study area have been recorded to be seven different types of cereals, 7 types of vegetables and 6 types of fruits growing in the garden of the farmers.

4.2.2 Livestock and Livelihood System

In the farming systems of Nepalese agriculture, livestock have been found to be a major component of the rural area. Every household keeps few small or large animals in their farm. This situation has also been reflected in the study area.

During the study the researcher found and reported that almost all households has few animals ranging from hen to goat, cow and buffaloes. In the study area, hen ranked first followed by goat, pig, ox, and cow respectively. Farmers reported that they did not have yet a large number of improved breed of animals (Table 4.14). This is due to expensiveness of the improved breeds, required special attention and less tolerable to adverse condition.

Table 4.14: Types of Livestock Reared by the Farming Community

S.N	Category of animals	Ratanpur	Dandajheri	Total	Average percent
		(HHs)	(HHs)	(HHs)	
		No. of HHs	No. of HHs	No.of HHs	
1	Buffalo	28	53	81	44.5
2	Cow	75	46	121	66.48
3	Ox	62	64	128	70.32
4	Male buffalo		25	25	13.73
5	Goat	81	77	158	86.81
6	Hen	95	78	173	90.05
7	Pig	81	64	145	79.67
8	Pigeon	10	7	17	9.34
9	rabbit		4	4	2.19

Source: Field Survey, 2008

4.2.3 Food Preservation and Sufficiency

Table 4.15 shows that the percentage of HHs having sufficient food is quite low 33.3% in the study area. Vast majorities of HHs 66.6% have been lacking sufficient food for all round the year (Table 4.15, 4.16 and Figure 4.6). Respondents explained that majority of the people from the poor category are lacking sufficient food for more than 6 months. During the food deficiency period, they adopt different coping strategies like buying food from nearby shops/markets, borrowing, or buying from local landlords or obtain food grain as a payment of wage labor. It is reported that most food deficit months are June and July.

Figure 4.7: Food Preservation and Sufficiency

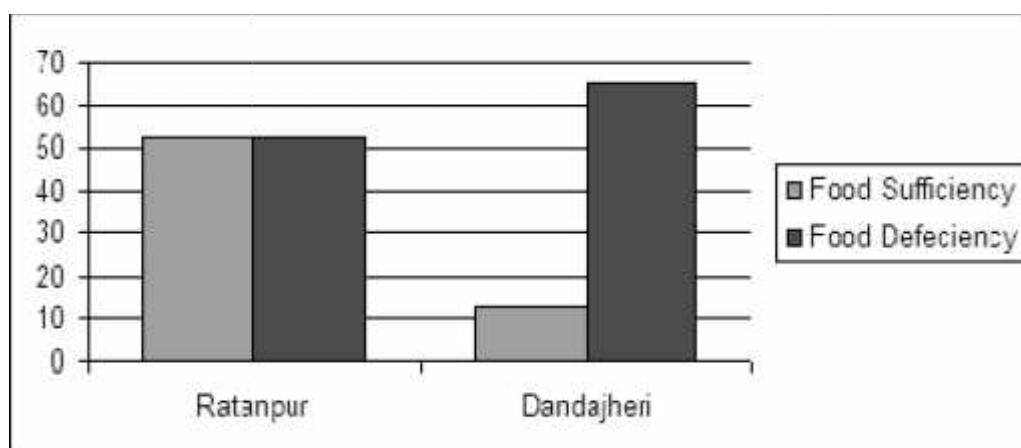


Table 4.15: Food Preservation and Sufficiency

S.N.	Study Area	Food Sufficiency		Food Deficiency		Total HHs
		No. of HHs	%	No. of HHs	%	
1	Ratanpur	52	50	52	50	104
2	Dandajheri	13	16.6	65	83.3	78
	Total	65	33.3	117	66.6	182

Source: Field Survey, 2008

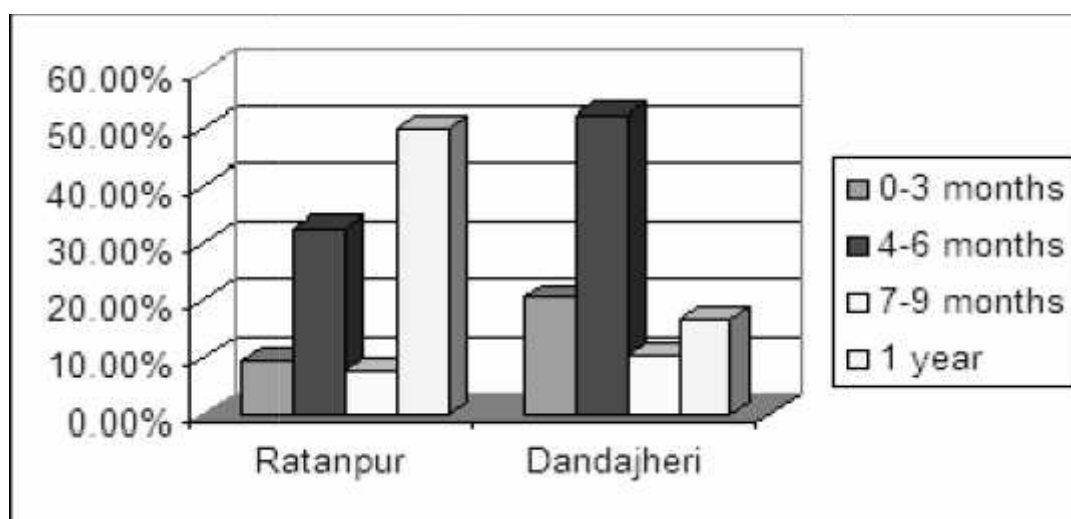
Opportunities for getting sufficient work for wage labor in villages have also limited and competitive. Even for medium economic category of people, agricultural production has not been adequate for sale. Due to the lack of cash in hand, poor people are severely suffering from food scarcity. The majority of responded HHs in Ratanpur (50%) is getting sufficient food than that Dandajheri (16.6%).

Table 4.16: Food Security within a Year in the Study Area

S.N	Food Sufficiency										
	Study Area	0-3 Month		4-6 Month		7-9 Month		1 Year		Total	
		No. of HHs	%	No. of HHs	%	No. of HHs	%	No. of HHs	%	No. of HHs	%
1	Ratanpur	10	9.6	34	32.7	8	7.6	52	50	104	100
2	Dandajheri	16	20.5	41	52.5	8	10.2	13	16.6	78	100
	Total	26	15.5	75	42.6	16	8.9	65	33.3	182	100

Source: Field Survey, 2008

Figure 4.8: Food Security within a Year in the Study Area



4.3 Marital and Health Status

4.3.1 Age of Marriage and First Child Bearing

Table 4.17 and Figure 4.9 show the average age of marriage and first child bearing in the study area. The average age of marriage is higher 21.3 years in Ratanpur where as 20.1 in Dandajheri. As a whole, the average age of marriage is 20.2 years of age in study area. Its shows the high to the national average of 18.1 years as a marriage age of female (CBS, 1995). Similarly, married women give first childbirth at the average age of 22.15 years.

Table 4.17: The Average age of Marriage and First Child bearing in the Study Area HHs

Marriage		
S.N.	Study Area	Average age of marriage (Male, Female)
1	Ratanpur	21.3
2	Dandajheri	20.1
Total		20.2
Child bearing		
S.N.	Study Area	Average age of first child bearing
1	Ratanpur	22.7
2	Dandajheri	21.6
Total		22.15

Source: Field Survey, 2008

Age of marriage and first childbearing age plays crucial role for the health condition of women. Early marriage as well as early child bearing has great negative consequences in the health of women. This child marriage and child motherhood have found more common in higher caste poor families.

Figure 4.9: Marital Statuses

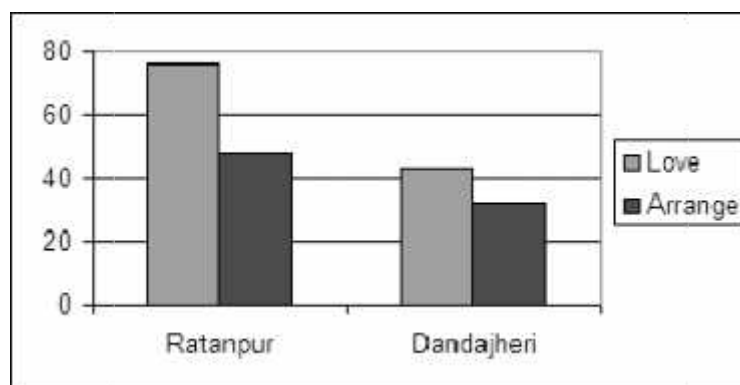


Table 4.18: Type of Marriage in the Study Area

Study Area	Type of Marriage		
	Love Marriage (In pairs)	Arrange Marriage (In pairs)	Total pairs
Ratanpur	76	48	124
Dandajheri	43	32	75
Total	119(59.8%)	80(40.2%)	199

Source: Field Survey, 2008

4.3.2 Health Status

This section provides general information on the health and nutrition situation of the study area. Both VDCs of the study area have sub-health post supposed to provide some primary health facilities. However, it is reported that due to the problems like lack of sufficient medicines, wider command area of the health-post (scattered villages) and lack of trained manpower, the health services supposed to be delivered by these health posts are not sufficient. It is revealed that those who can afford directly go to hospitals than to approach to these sub-health posts. It has been reported that all VDCs have birth attendants trained by District Public Health Office (DPHO) and are providing services to the village women with their limited time and resources. It has been found interesting to note that in all research sites immunization for DPT, BCG, Polio, and measles is common.

4.3.2.1 Breast-feeding Status

Table 4.19 shows that the breast-feeding status of the study area. The breast-feeding is very common in the study area as lactating mothers of more than 64.1% to 68.2% HHs practice breast-feeding. Similarly, more than 17.9% women in the study area also practice colostrums feeding.

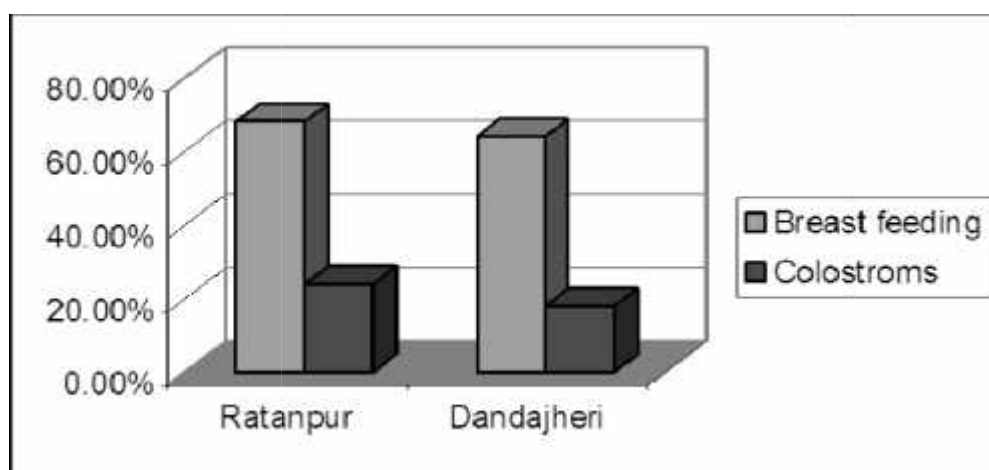
Table 4.19: Breast-feeding Status of the Study Area

S.N.	Study Area	Breast feeding HHs(182)		Colostrums feeding HHs	
		No of mothers	%	No of mothers	%
1	Ratanpur (104)	71	68.2	25	24.03
2	Dandajheri (78)	50	64.1	14	17.9
Total		121	66.15	39	20.96

Source: Field Survey, 2008

Female participants have explained that many of the women giving first child birth were less aware about the importance of colostrums and some women even believe that yellow milk secreted for the first time is not good for the new born children.

Figure 4.10: Breast-feeding Status



4.3.2.2 Vaccination to children

Vaccination is one of the most effective and reliable preventive measures. It is interesting to note that immunization is very common at all sides of the study area. Table 4.20 indicates that more than 76.24% HHs have been practicing immunization of their children for BCG, DPT, Polio, and measles (Table 20).

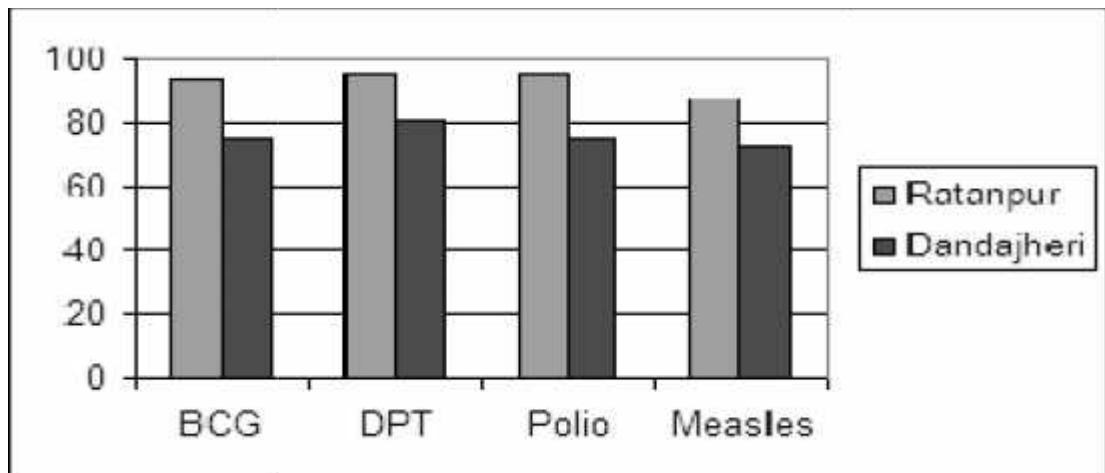
Table 4.20: Vaccination to Children in the Study Area

Vaccine	Ratanpur		Dandajheri	
	No. of HHs	%	No. of HHs	%
BCG	98	94.2	59	75.6
DPT	99	95.1	63	80.7
Polio	99	95.1	59	75.6
Measles	91	87.5	57	73.07
Average	96.75	92.97	59.5	76.24

Source: Field Survey, 2008

Main reason for such higher rate might be due to the national immunization program of the government administered through its network of public health offices, hospitals, and health posts.

Figure 4.11: Vaccination to Children



4.3.2.3 Child Death and Reasons

Child death has been noted as a common problem in Nepal. In the study areas, distance of hospital has been reported to be the major cause of child death in all four VDCs followed by pneumonia, malnutrition, typhoid, jaundice, diarrhea, and then lack of knowledge (unknowing cause). From table 21 it is evident that the distance of hospital was the emergency reported among the surveyed HHs. This is also the cause of health problems and death.

Figure 4.12: Causes of child death in Ratanpur and Dandajheri

Table 4.21: Child Death Situation in the Study Area

S.N.	Reason of Death	Ratanpur (295children)	Dandajheri (207children)	Total
		No. of children	No. of children	
1	Due to distance of hospital	6	10	16
2	Pneumonia, Fever	6	4	10
3	Malnutrition	11	3	14
4	Typhoid	2	2	4
5	Befer	2		2
6	Dysentery		2	2
7	Others	35	14	49
	Total	62	35	97
		21.01%	16.9%	19.32%

Source: Field Survey, 2008

4.3.2.4 Common Diseases/Illnesses and their Control Measures

Access to better health facilities in rural areas is severely limited. Due to the cultural belief and poor economic conditions, access to and use of health facilities in the villages are far below the level of satisfaction. The disease/illness situation of the study areas within one year of the study time has been presented below.

Table 4.22: Incidence of Disease/Illness in the Study Area (within last 1 year)

S.N.	Study Area	Affected by disease		Not affected by disease		Total HHs
		No. of HHs	%	No. of HHs	%	
1	Ratanpur	55	52.8	49	47.1	104
2	Dandajheri	57	73	21	26.9	78
	Total	112	62.9	70	37	182

Source: Field Survey, 2008

Table 4.22 shows that the incidence of disease/illness in the study area is within one year. In the study area, it is reported that 62.9% people suffer from diseases and illness within 1 year of the study. In case of VDCs wise comparison a huge amount 73% people of Dandajheri are affected by disease whereas only 52.8% in Ratanpur are suffering from the same. The table 4.22 has revealed that people are suffering

from communicable diseases are more than the non-communicable diseases in the study areas.

4.3.2.5 Prevailing Treatment Methods

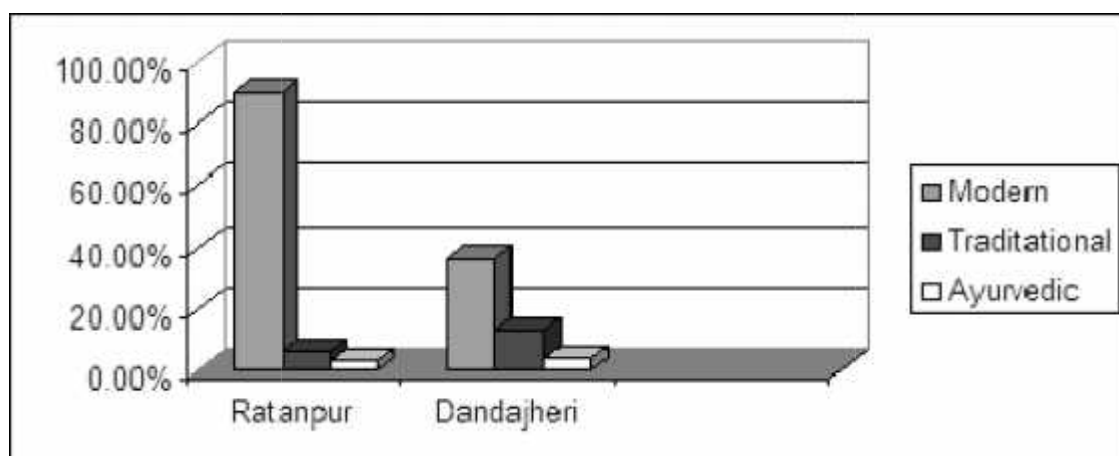
The most common treatment method is modern medicine, which is used by people of the study area followed by traditional and ayurvedic methods (Table 4.23). Modern treatment defined by farmers was to go to the health post and hospitals, and use medicine according to the suggestions of health workers.

Table 4.23: Prevailing Treatment Method against Diseases in the Study Areas

Treatment Methods	Ratanpur 104 HHs		Dandajheri 78 HHs		Total RHHs	% HHs
	No. of HHs (63)	%	No. of HHs (69)	%		
Modern treatment	57	90.4	25	36.2	82	62.13
Traditional	4	6.3	9	13.04	13	9.84
Ayurvedic	2	3.1	35	50.7	37	28.03

Source: Field Survey, 2008

Figure 4.13: Prevailing Treatment Method



In traditional method, faith healers and witch doctors are the main actors to treat the patients. Ayurvedic treatment method defined by farmers is to use medicines derived from plants and animals by their own efforts. Large number of people in two VDCs (82 RHHs) 62.13% believe on modern treatment method in comparison to the traditional

treatment method (13 RHHs) 9.84% and ayurvedic medicine (37 RHHs) 28.03% in the study area.

4.3.2.6 Using the Toilets

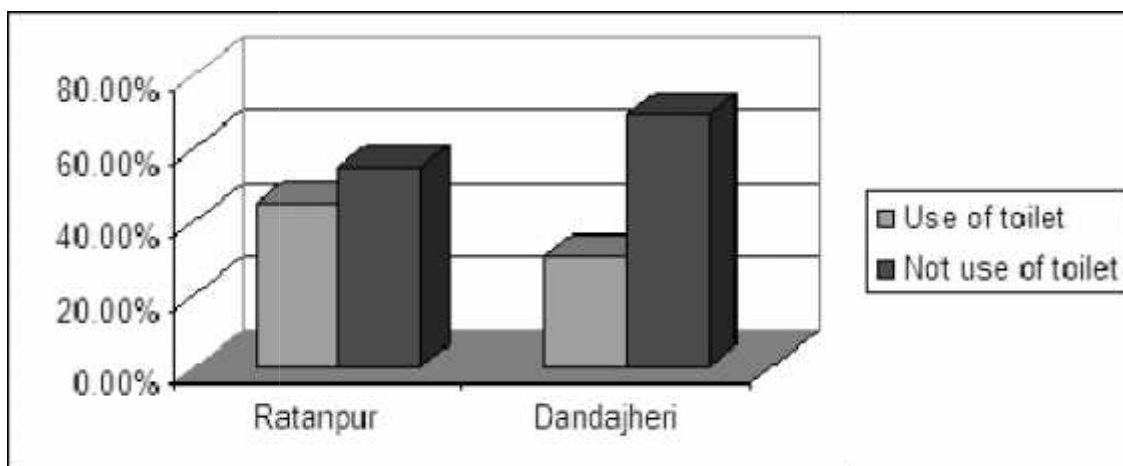
Only 37.9% HHs have been found as using the toilets, whereas 45.1% HHs of Ratanpur and 30.7% HHs in Dandajheri do use the toilet (Table 4.24 and Figure 4.14), where as 62.1% of people usually go in the field, riverside and public ways, and roads. Even many of them do not know the reason to use toilet.

Table 4.24: Use of Toilet in the Study Area

S.N.	Study Area	Use of Toilet		Not use of Toilet		Total	
		No. of HHs	%	No. of HHs	%	No. of HHs	
1	Ratanpur	47	45.1	57	54.9	104	
2	Dandajheri	24	30.7	54	69.3	78	
Total		71	37.9	111	62.1	182	

Source: Field Survey, 2008

Figure 4.14: Using the Toilet



4.3.2.7 Drinking Water

Clean drinking water is one of the important factors for safe health. Water born diseases can be prevented from the clean drinking water. Table 4.25 shows that tap water as a major source of drinking water scores highest rank followed by wells and streams respectively. The number of respondents using wells as a source of drinking water is higher in Dandajheri as compared to Ratanpur. In some cases, people are traveling up to one Kilometer to access for drinking water. It has revealed that

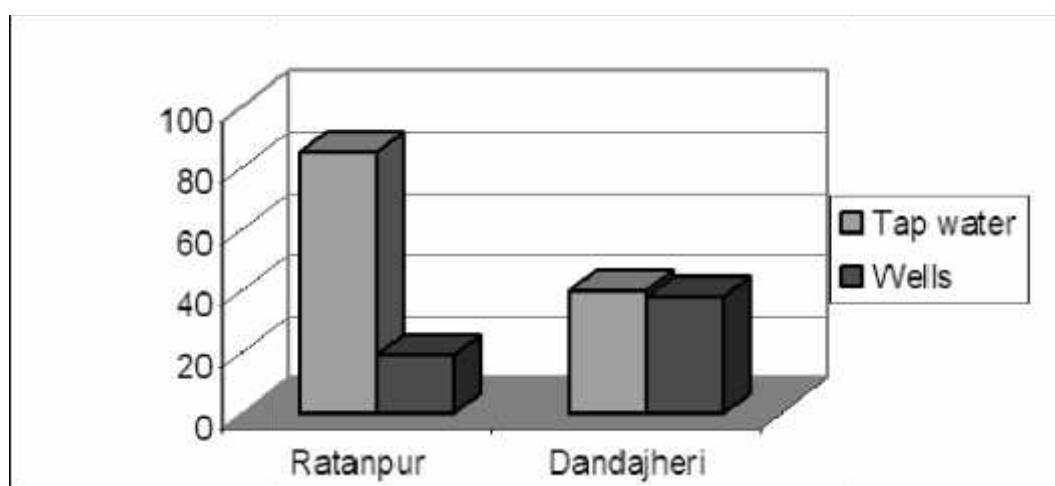
sanitary condition of the surroundings of the majority of water sources seem poor due to improper disposal of wastewater used for washing and cleaning. Stagnant water around the water source has enhanced mosquito breeding as well as contaminated drinking water through leaching around the wells.

Table 4.25: Major Sources of Drinking Water

S.N.	Source	Ratanpur		Dandajheri		Total
		No. of HHs	%	No. of HHs	%	No. of HHs
1	Tap water	85	81.7	40	51.2	125
2	Wells	19	18.3	38	48.7	57
Total		104		78		182

Source: Field Survey, 2008

Figure 4.15: Major Sources of Drinking Water



4.3.2.8 Alcoholic and Smoking Condition

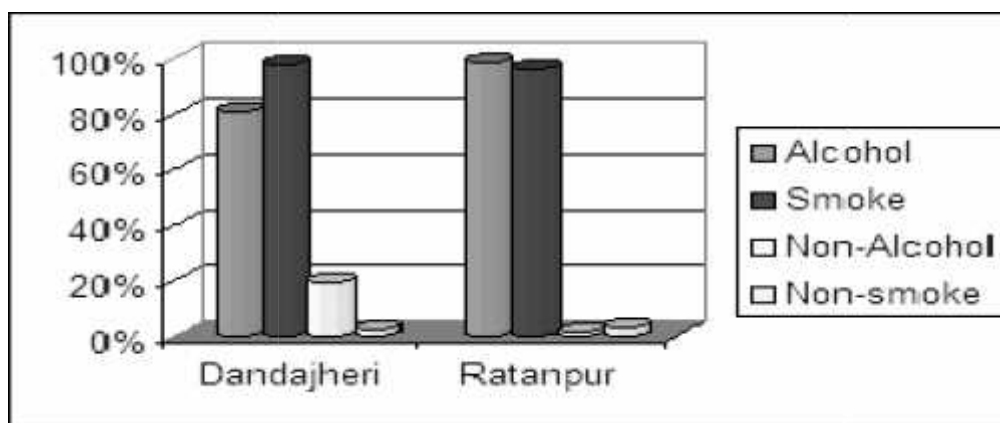
In general, alcohol and smoking is a common practice in many parts of Nepal. Increasing number of alcoholism and smoking have been different problems in households and communities.

Table 4.26: Alcoholic/Smoking Condition of Study Area

Study Areas	Uses of Alcohol and Smoke								
	Alcohol Users		Smokers		Non-Alcohol Users		Non-Smokers		Total
	No. of HHs	%	No. of HHs	%	No. of HHs	%	No. of HHs	%	No. of HHs
Ratanpur	102	98.07	100	96.1	2	1.92	4	3.8	104
Dandajheri	63	80.76	76	97.4	15	19.2	2	2.5	78
Total	165	89.41	176	96.75	17	10.56	6	3.15	182

Source: Field Survey, 2008

Figure 4.16: Alcoholic/Smoking Condition



This study has revealed that more than 98.07% and 96.1% HHs of Ratanpur use alcohol and smoking whereas about 80.76% and 97.4% HHs from Dandajheri use the same. It has seen that people from lower educational status and poor economic condition use more smoking and alcohol.

4.4 Indigenous Knowledge

Here, Indigenous knowledge means that something is originating locally and performed by a community or society in a specific place. Indigenous knowledge is not formally taught, but perceived in a particular context at a certain stage of the perceiver's consciousness that grows in the world of local events. There is the idea that an environment can only be properly managed by its inhabitants and not by ultimately absent experts from outside and the indigenous practices of local settlers are found environment friendly. Indigenous knowledge is the single largest

knowledge base in Nepal not yet properly utilized in the development discourses (Upreti, 1998). Mobilization and dissemination of information on available IK is lacking in Nepal. Vast stock of IK and skills still exist especially in the rural communities (Upreti, 1998).

The field observation study in the research sites shows that there is a wide IK gap between the generations. People from older generation have, for example, tremendous knowledge on availability and use of herbal medical plants whereas the second generations is partly lacking this knowledge and the third generations have very negligible idea at all on those issues. This study has examined the current status of use and ignorance of IK on food habit, management of bio-resources, treatment of diseases, etc. It is realized that the vital role that IK plays in the conservation and sustainable use of bio-resources. Study revealed that indigenous knowledge on herbal medicine use, soil fertility management, selection of species, vegetables, etc have been decreasing and even lost. Surprisingly, farmers from second generations are not much sensitive to varieties diversity. In many cases, young farmers have poor knowledge on past use of diversity of vegetables and cereal varieties. However, older farmers have recalled their past knowledge and expressed that people at present are not ready to listen the past experiences and performance of crops and vegetables cultivation.

Soil fertility management by rotational animal stalling/herding and incorporation of animal urine immediately to soil, inter-cropping of wheat and peas, planting of pulses and etc. crop in paddy fields, insects control by the use of local herbs, soil grub and red ant control by animal urine and frequent ploughing.

It is realized that awareness rising on the importance of indigenous knowledge is essential to preserve it and apply. Demonstration of such indigenous practices is one of the ways promote awareness. Similarly, detail inventorization of such practices and preparation of small booklets about them may help to raise awareness. In some cases, indigenous knowledge is not economically feasible option but in many cases, it was economically more suitable (Upreti, 1998). Therefore, action research on economic effectiveness of selected indigenous practices is essential to sustain and promote such knowledge and practices.

CHAPTER-FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This study is a field oriented action research to explore social composition, agricultural and bio-diversity, health and nutritional conditions of rural communities with special focus on women and children through improvement, assessment, and harnessing the potentiality of local bio-diversity and natural resources. The research sites consist of two VDCs Ratanpur and Dandajheri of Nawalparasi district.

The research methods used for study were structured questionnaires, discussions, observation, and key informants interview, which were used to collect the relevant qualitative and quantitative information.

Findings of the study are presented in four sections, which are demographic and socio-economic condition, agriculture and bio-diversity, marital, health and nutrition and indigenous knowledge.

The average family size in the study area is 7.09 with 49.4% male and 50.6% female. Out of total population of 1235 from the 182 HHs studied 40.64% are children below 12 years of age. In addition, among the respondents only 15.3% HHs belongs to rich category.

The main occupation of the respondents in two VDCs is agriculture (69.5%), service (3.65%) and other sources of income (19.9%). The source of income include labor work, weaving/knitting, making alcohol, dried ginger (Suttho), business, and service (inside and outside country). About 39.1% people of these VDCs have found literate with 46.17% female and 53.8% male literacy rate. More than two percent of the total HHs studied is landless, while 29.1% had more than 5 ropani, 52% had 5-20 ropani and 15.30% of total HHs has more than 20 ropani lands.

Agricultural and bio-resources are recorded. Maize is the major crops in all two VDCs followed by rice, finger millet in second priority and wheat and buckwheat are in third priority. Similarly, vegetables and fruit crops are commonly grown in both VDCs.

Except in cereal crops; varieties diversity is more in these two VDCs of Nawalparasi District.

Farmers have been growing vegetables and other fruits only for their daily uses. Farmers of Ratanpur and Dandajheri cultivate more ginger to produce suttho (Dried ginger). They also produce alcohol and sell in the market which is their other major sources of income mainly Ratanpur. Forests are used for livestock raising more in both VDCs. In Ratanpur Hen, Pig and Goat were the most popular livestock followed by Ox, Cow, Buffalo, Pigeon, Duck and Rabbit. The most common cropping pattern in the study area includes maize-millet in upland and rice-wheat-vegetable or maize in low land in both VDCs.

Several medicinal plants are recorded in the study area but their proper use and exploitation is very low. More plant species have been recorded as medicinal plants used for treatment of various diseases, but their uses are very limited. Few people depend on local medicine and among them, only few elderly people know how to use these plants.

Food and nutritional aspects in the research areas seems very poor. Malnutrition has been commonly observed in several villages of these VDCs. More than 66.6% HHs are not self-sufficient in producing food crops. Therefore, it is evident that the nutritional aspect of these VDCs has to be taken carefully.

The average age for marriage of male and female was 20.2 years and first childbearing age is 20.2 years. Love marriage is popular where 59.8% pairs are fall on love marriage in both VDCs. Most of the mothers have used breast-feeding to their child up to the age of six month. Health situation of the study area is affected by unavailability of medicine and health service providers in the local health posts. However, birth attendants are available and child immunization is common in both VDCs. Nearly 62.9% HHs have reported to be suffering from some illness in the past 1 year. The main diseases/illness reported in both VDCs is fever, diarrhea, common cold, headache, pneumonia, and abdominal pain etc. Child death due to unknown cause and distance of hospital is ranked first followed by Pneumonia, Fever, Malnutrition, and Jaundice in research sites. For the treatment of diseases/illness,

respondents mostly have preferred to use modern medicine followed by traditional and ayurvedic ones. More than 86.4% children have reported to give vaccination against BCG, DPT, Polio, and Measles.

More than 62.1% HHs do not use toilet. They used to go toilet far from the house in field, riverside, public ways, and roads and nearby forests.

Drinking water sources include mainly tap water and wells with mainly unhygienic condition. In some cases, people are found to be traveling up to one Kilometer for drinking water. Sanitary condition of the surroundings of the majority of water sources seem poor due to improper disposal of waste water used for washing and cleaning and open toilet system. This study has indicated that more than 89.41% of the farmers have alcoholic and smoking habits.

Present study has shown that vast amount of indigenous knowledge exists in the study area but the gap is increasing between new and old generations. New generations have limited knowledge and preferences for local or traditional practices. Finally, a list of recommendations has been presented at the end of this report.

5.2 Conclusion

The study has been conducted to identify the social-composition of the study areas, physio-geographic condition, agricultural and bio-diversity, health and nutritional condition of people and importance and rationale of indigenous knowledge pattern in the life of local settlers.

The Tools and techniques used to conduct the research study to collect and gather the required information from the universe of the study were found as useful to reach the in-depth reality of society, its surviving pattern, economic and social system of society and societal cultural and social aspects.

Study reveals the diverse social composition of multi-caste/ethnic communities. Marginalized and back-warded communities have been found as landless communities. Remarkable number of the HHs is involved in daily wage labor due to the landless migrants. Gender discrimination and imbalances have been prevalent in

the study areas. Women have the intensive work burden and socio-cultural stereotypes are assigned to women.

Majority of the HHs have been found with less food sufficiency and suffering from food deprivation and lack of clean drinking water. People are obtaining traditional occupation and techniques of farming. Although the availability of health services near the neighbor districts, they cannot reach there because of the long distance.

As per the indigenous knowledge system of community, the new government has been gradually forgetting it even though it is found to be useful for running their livelihoods, and protecting environment.

5.3 Recommendations

Some recommendations were made based on the findings of study:

-) Skill enhancement and capacity building related program suitable to these areas should be identified and launched systematically in their areas to address the poverty related problems.
-) Documentation of social context including their problems, opportunities, and strengths: preparation of leaflets/booklets, presentation of drama in the local areas to make them aware about their problems, assessment for bio-resource for its management should be carried out.
-) Program to raise awareness on discrimination against women as second sex in the community including the real scenario of discriminatory practices in the areas through electronic and non-electronic media should be conducted so that it could raise the women involvement in getting educational and in development activities.
-) Awareness about health and health campaign for communicable diseases needs to be organized in the areas of studies and is recommended to disseminate the health related information in each home of the research areas. Awareness rising programs for building toilets near to home for keeping clean and healthy environment should be conducted.
-) Awareness package must be implemented in all research sites simultaneously with other research activities. Tours, training, meeting, and method and result demonstration should be part of the awareness program.

-) Vast majority of the HHs in the study areas have been found engaging in agricultural activities to run their livelihoods and their agricultural pattern are still traditional and conventional and they do not have ideas of hybrid seeds. Training and ideas should be provided to strengthen agricultural pattern to increase the productivity. As a business perspective soil testing, seed quality tests, horticulture, and knowledge about high productive livestock etc needs to be emphasized to increase the productivity from agriculture.
-) Drinking water quality test needs to be carried out to ensure the safety of drinking water quality.
-) Programs to protect and convince the new generation about the importance of indigenous knowledge to protect our environment, ecology and to run our livelihood are found essential. Cost effectiveness, accessibilities, simplicity and harmless to our health and environment are the dual benefits of indigenous knowledge that should be focused in order to protect such indigenous knowledge system, which is transforming and modifying from generation to generation.
-) Besides these, it would be better to implement the all activities in those existing groups who do not have easy accessibility to many facilities and comparatively better off.
-) It is highly required to bring the local CBOs and NGOs in front and leading position of the entire programs to provide support connection and collaboration by outsiders (NGOs, GOs and INGOs). In addition, it is needed to build capacity of the local organization that could get support to formulate and draw their goal; long and short-term objectives and development activities identification and prioritization of these livelihood improvement activities.

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APPENDIX - 1

Survey Form

Name of Respondent:

Age:

No. of Family Members:

1. Socio-economic Information

a. Head of the Family:

b. Address: VDC: Ward No.:

c. Tole: d. Major Occupation-.....

e. Religion-..... f. Ethnicity.....

Academic Status

a. Illiterate b. Literate

If literate- a. Formal b. Informal

i. Primary Education ii. Lower Secondary Education

iii. Secondary Education iv. Higher Secondary Education

v. Bachelor's Degree vi. Master's Degree

vii. If above

2. Involvement of Family Members in any Social Organization-

Social Organization	Name of the Member

3. Family Detail

Number of family members -

S N	Names of family members	Age	Education		
			Illiterate	Literate	Class/Level

4. Detail of House

a. Type of House- Thatched-roof/ Copper-plate, Stonned/Tile/ RCC/ Hut

b. Do you have well-managed permanent toilet?

c. If no, how far from home do you go for toilet?

5. Land Detail-

Land	Irrigated	Non-irrigated
Khet		
Bari,Khar,Pakho		
Banpakho		
Ailani		
Other		
Total		

6. Income

a. From Agiculture

Crops	Product	Amount of Crops and its Use (Yearly)			
		For Daily Meal/ Tiffin (in muri/kg.)	To Pay Wages (In Muri/kg)	To Produce Local Wine (in Muri/kg)	To Sell in Market (in muri/kg)
Rice					
Wheat					
Maize					
Millet					
Buck Wheat					
Barley					
Potato					
Soya beans					
Beans					
Peas					
Pulses					
Peanut					
Mustard Seeds					
Cauli Flower					
Tomato					
Chilli					
Pumpkins					
Reddish					
Banana					
Oranges					
Lemon					
Jackfruit					
Pineapple					
Guava					
Mango					
Leechi					
Others					

b From Livestock Farming

Livestock	Objective of Farming		Product (Yearly)	Uses/Income
	Major	Minor		
She Buffalo				
He Buffalo				
Ox				
Cow				
She Goat				
He Goat				
Chicken				
Ducks				
Sheep				
Pigs				
Hare				
Pigeon				
Fish				

7. Use of Leisure Time

Description		Involvement Days (Yearly)	Production Amt.	Daily Wage and Per Unit Production Rate	Income (Yearly)
Unskilled Labour					
Skilled Labour					
Hand-made Products	Doko				
	Soli				
	Mandro				
	Nanglo				
Furniture					
Other					

8. Other Sources of Income-

Description	Involved Family Members	Monthly Income
Private Job		
Teacher		
Gov. Jobs at VDC		
Army/Police		
Retired		
Seasonal Work		
Trade/ Business		
Producing Wine/Selling		
Other		

9. Food Security

Is the product enough for yearly use?

- a. Yes..... Do you also sell the more?.....
- b. No..... For how many months?.....

10. Family Health

a. Did anybody fall sick at your home within last one year? Yes/No

If yes, who and what was the problem?

Patient's Name-.....

Health Problem-.....

b. Where did you go for treatment?

- i. Hospital ii. Ayurvedic Dispensories iii. Health Post
- iv. Witch Doctor v. If other-.....

c. What are the major health problem mostly found in your family?

.....

d. Where do you bring the drinking water from?

- i. Tap ii. Well iii. River iv. Other

e. How do you use the drinking water?

- i. Keeping Open ii. Covering by lid iii. By Boiling iv. Other.....

f. How many members use tobacco products daily at your home?

- i. Below 12 yrs-Male-.....Female-.....
- ii. 13 to 20 yrs- Male-.....Female-.....
- iii. 21 yrs and above-Male-.....Female-.....

g. How many members use alcohol at your home?

- i. Below 12 yrs-Male.....Female-.....
- ii. 13 to 20 yrs-Male-.....Female-.....
- iii. 21 Yrs and above-Male.....Female-.....

11. Marital Status

Name of Married Members	Age at Marriage	Type of Marriage		Who decided the marriage?		Age at 1 st conception
		Arranged	Love	Self	Guardians	

a. Who decides for child's birth?

- i. Husband ii. Parent-in-law iii. Wife iv. Husband/Wife

b. Do you vaccinate your child? Yes/No

- If yes, what are they? i. BCG ii. DPT iii. Polio iv. Measles

c. Which type of salt do you use? i. Iodised/Packed Salt ii. Open Salt

d. Number of children at home-.....

e. Total Birth-.....

f. Total Death of Children-.....

g. Cause of Death.....

12. Facility available and the distance from the home

Facility	Drinking Water	Health Post	Hospital	Bank	Post Office	Telephone	Highway	Market	City	Other
Distance in km										

13. Social Factor-

a. Women Status-

Involvement of women in agricultural activities

Preparation of Land.....

Plantation.....

Reaping.....

Harvesting.....

b. Ownership in Property

Property

Ownership

Ornaments

Yes-..... No -.....

House Yes-..... No -.....
 Land Yes-..... No -.....
 Livestock Yes-..... No-.....

b. Role in making family decision-

- To make home
- To buy/Sell Land
- To admit Children in School
- To arrange children's marriage
- To migrate
- To take members to hospital
- To choose/use family planning devices
- Other

14. About the Festivals

Festivals	Total Days	Average Expenditures			
		Meat	Alcohol	Cash	Other

*****The End*****