

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 BACKGROUND OF THE STUDY**

Nepal is a small, landlocked and agricultural country with an area of 147,181 square km. Its total population is 23.4 million. The number of household is estimated at 3.68 million and about 68 percent of the population resides in rural areas. It is one of the most wonderful natural creations of the world. It is the land of marvelous, mountain, villages, green terraces, hill side and amazing diversity of flora and fauna.

Administratively, Nepal is divided into 14 zones, 75 districts more than four thousand VDCs. It is the ranking second richest country in water resources the world. It has bounded by great Himalaya and that is the main source of fresh water. But the resources are hardly used for human needs.

Water is truly unique commodity, without it life doesn't exist. Life can become equally forward even when there is water all round. While excess water in the form of floods and water defect in the form of droughts have struck Nepal time and again. Consumption of unsafe water has taken thousands lives every year. Poor knowledge about the relationship of the contaminated water and disease, the safe handling of water and other sanitation practices cause 80 % of the diseases leading to illness and death among Nepalese infants. Besides, majority of the rural population are in very difficult living conditions with a little facility to provide cleans drinking water and sanitation. Only one person of every four people in Nepal has access to portable water. Thus, lack of adequate water for domestic purposes and lack of awareness of the importance

of sanitation behavior have resulted poor health conditions. One of the basic objectives of water supply improvement in rural Nepal is to improve the people's health.

The supply of safe drinking water has long been taken for granted in the industrialized places where water flows reliably from household taps. More than 40% of the world's inhabitants, however, do not share in this certain, access to water (UNICEF & WHO; 1993). In many countries, the collection of water often from contaminated sources is a daily task that consumes a tremendous portion of women's valuable time and energy. The consequences of this burden are harshly reflected as short and long-term health status of the poor Nepalese people. Lack of water and poor sanitation practices contribute to the vast majority of the illness found in the developing country like Nepal. According to 1991 census, each year 102 out of every 1000 children were dying before they were one year old, and 42 more before they reached 5 and 45% of these were attributed to diarrhea alone, causes from water related disease.

The human development report 1998 of the United Nation Development Programme points out that "despite a more than doubling of the number of people with access to safe water since 1980, some 1.3 billion people still lack access to safe water and some 2.5 billion access to adequate sanitation. Socio-economic and human development depends upon the fulfillment of the basic human needs. This need can only be satisfied with availability of an adequate supply of water that meets minimum standards of quality. Vast members of people, however, lack access to safe drinking water and rudimentary sanitation services. Access is defined by the World Health Organization as "the availability of at least 45 liters of safe water per person, per day at a source within a mile". It is estimated that only 68 percent of the rural population in the developing world have access to piped or well water supplies (WHO: 1995). 90% Nepalese people live in rural areas. It is estimated that of this population,

34% currently have access to safe water and only 3% to sanitation facilities (NG/UNDP; 1991). In recent years, Nepal government has given top priority to increase coverage of water supply facilities. Nepal government aim to supply safe and easily accessible water to all the citizens by in the end of ninth five-year plan (Ninth plan 2002). In Nepal, ministry of housing and physical planning has the overall responsibility for the water supply sector which includes planning, coordination of budgets and programmers and development policy proposals. Similarly several government departments also work closely with in this sector such as, department of water supply and sewerage, which is responsible for improving rural and urban water supply systems. Also various INGOs and NGOs significantly contribute their parts to access this facility to people.

In Nepal, we find that the very first pipe water supply was introduced in 1895 during the Rana Regmi. Even though, water was supplied through various sources in Nepal in different cities, it was only in 1972 that the department of drinking water supply and sewerage was established.

Unsafe drinking water and lack of sanitation knowledge push behind very low health as well as socio-economic status of the country. And many household female members contribute significant time to fetch and collect water for household purpose. Women are central figures in the management of household's water and sanitation activities but it is ignored in all the projects implemented by the agencies in the past.

There was no women participant before FY 1986/87 in the water supply and sanitation programme in Nepal. The importance of involvement of women in water supply and sanitation was realized in 1985 AD. IRC and PROWESS jointly revealed an account of the experiences with women's involvement in the book "Participation of Women in Water Supply and Sanitation: Roles and

Realities". Women participation will be made in implementation, maintenance and repair of the drinking water project, (The Eight Five Year plan 1992-97).

Due to the lack of latrines and little knowledge of health and hygiene people in rural areas defecate in the open place near rivers, streams or ponds, which directly pollute the water which is often a source of drinking water. In many communities where there are few or no latrine especial defection area may be found. Often some distance away from where the people live. Because faeces are spread throughout these areas, it is difficult to avoid stepping on it; People walking barefoot will easily get infected with hookworm. Animals around spread the human faeces and at the same time risk of getting infected with the eggs, pork tapeworm, flies and insects share in the transporting pathogens from these areas.

Thus, the government joins the hands with many collaborating agencies such as, NGO/INGO which are currently implementing the programmed related to water supply and sanitation focusing women. Without women's participation the programmes can't achieve its sustainability. After the restoration of democracy, the government duties are also increased and the government should not watch every development activities to provide its people for better life and needs because of establishment of various NGOs and INGOs related with and sanitation. Therefore, the government joins hands with many collaborating agencies such as, NGO/INGO to development various sectors.

Many NGOs/ INGOs and Bilateral agencies have been implementing water supply and sanitation projects in rural communities. Nepal Red Cross Society (NRCS) is one of the national NGO that implements the water supply and sanitation project in various parts of the country that aims to improve the quality of life through the provision of safe drinking water and primary health care in the rural areas of Nepal. NRCS with an active support of JRCS initiated

primary health care and drinking water supply programme (PHC/DWS) in 1983. Among them one of the projects is in Kahun VDC of Kaski district. The project was implemented through community participation. After the completion, the project was handed over to the local Water User Committee (WUC). Since then the WUC is managing water supply and sanitation programme at Kanhu VDC. Thus, this study seeks to explore the hidden reality to the content of women's participation and sustainable development after launching the water supply and sanitation programmes. Therefore, the researcher has taken this project site for the study.

## **1.2 STATEMENT OF THE PROBLEM**

Water scarcity and poor water quality always create human's health problems. Water scarcity and, inadequate sanitation represent the most basic and common causes of child morbidity and mortality. In Nepal, water availability per day in 1996/97 was 51777 thousands liters and the benefited population was 771 out of thousands (CBS, 1998). Similarly fetching water from long distances shows clear picture of tremendous time consumption of female members for their household chores. Due to illiteracy and little knowledge of sanitation, the rural people do not protect water from contamination, which creates more diseases related from water. More than 70 % of the diseases are caused by water pollution, (CBS, 1998).

Official statistical records indicate that about 49 % of the rural population and 58 % of the urban population had "safe" water supplies in 1995, and 3 % and 34 % of the rural and urban populations respectively had satisfactory sanitation arrangements, (CBS, 1998). Majority of people live in remote, often inaccessible areas. The infant mortality rate currently stands at 110 deaths per thousand live births. Though infants and children are particularly susceptible to water related diseases, adults are also affected by

water scarcity and poor water quality and human health problem (Lorenzen, 1996).

A high incidence of water related diseases contributes significantly to low productivity (ability to earn) in Nepal. Rural productivity is also constrained directly through the high time cost of collecting water, often more than five hours per household per day in many hills and mountain areas (World Bank, 1996). Women are the central figures in the management of household water and sanitation activities and related other productive sectors of economy but the ignored late 70's women's concern and issues also became accepted as part of the national development plans and programmes. The sixth plans (1980-1984) for the first time include a separate chapter addressing the importance of women's participation in the development process and made provisions for implementation of some relevant programmes. Despite the various measures that have been initiated and implemented, women's participation in almost in all sectors remains very limited.

More than 90 % of the females take whole responsibility for collection of water. In many areas of our country, it is understood that women are not participating in water supply and sanitation projects have not been able to deliver optimum service to the users. So it is said that women who are more involved in consumption and water related activities, her role has to be considered very important. The ultimate aim of women's involvement is to achieve a more equitable society with reference to decision making and planning. Water supply and sanitation project basically address women's practical gender needs by improving their condition through the provision of water and sanitation closer to their houses. The key concept of women's involvement is "community" focusing on women's role in water. And the sanitation projects require viewing and treating women as a part of total communities, rather than as a special part of separate group. The potential contribution of women to these objectives emerges logically from their

traditional participation in water supply and sanitation. As domestic managers women decide where to collect water for various purposes and in various seasons, how much water to collect and how to use it. In their choice of water resources, they make rational decisions based on their own criteria regarding access time effort, water quantity and source reliability. In addition much of the informal learning about water and sanitation takes place through interpersonal contacts among women. Thus, their needs and opinions have important consequences for the acceptance, use and willingness to maintain new water supplies and for the ultimate health impact of the villagers.

As human water transporter, women spend between four to seven hours a day in water collection, carrying water in their heads or backs in heavy pots and buckets. Women and girl children are easily exposed to injuries and are vulnerable to spinal problems and water born diseases. Thus, the right attitude, care and priority given to women's roles can result in their enormous qualitative and quantitative improvement in development attempt. This study seeks to answer the following questions.

- ) What is the socio-economic condition of women of study area?
- ) What types of role have they have played to manage the water supply and sanitation programmes in the study area?
- ) How much time has been saved after the programme?
- ) How has the saved time been utilized?

### **1.3. OBJECTIVE OF THE STUDY**

The present study aims to analyze the pertinent issues connected with the role of women in water supply and sanitation sector and the overall impact on socio- demographic and socio- economic aspect. As a focus of this research, the fundamental objectives set for this study are as follows:

1. To analyze the socio-economic and demographic characteristics of women of the study area.
2. To identify the role of women in water supply and sanitation programme and the type of contribution give in the community by the women.
3. To study the impact of water supply and sanitation programme of women's life.

#### **1.4. IMPORTANCE OF THE STUDY**

Women are the main stakeholders in overall water supply and sanitation programme, In addition to this fact the government clearly identifies in the eight five year plan that women's participation in the field of community development programe can not be avoided. But, there are some difficulties to launch the programme in the areas of drinking water supply that reflects the local population of women that still remains deprived by various reasons.

The study highlights women's potential contribution towards water supply and sanitation and its changing effects upon family sanitary habits. This study clearly shows that by involving women in water supply and sanitation, the women can contribute a great deal to the better planning, functioning and utilization of the improved facilities when provided with appropriate training and support because traditionally women have been basic managers of water installation.

The importance of this study is to find out how water supply and sanitation facilities help our rural society in general and rural women in particular to uplift socio-cultural and socio-economic status. As the DWSS sector is a social service delivery type sector, a direct cost benefit analysis



during the planning and implementation phase is mostly neglected. Since the sector in itself is a service oriented one and tends to affect in long run, various other sectors such as health, hygiene, economic development etc, the cost benefit analysis in itself is vague and time consuming.

As such the importance of this study is to draw some sort of relationship as how the water supply and sanitation sector affects the other social and economic sectors in general and the role of the women within the DWSS sector in particular. This study also highlights the importance of learning that safe water alone does not reduce water born disease, but the knowledge of the environmental sanitation and awareness plays a key role in reducing these diseases. Moreover, the outcome of this study is expected to be helpful to the planners (Implementers, Administrators and Researchers).

## **1.5. LIMITATION OF THE STUDY**

The study is limited to the area of Kahun VDC where water supply and sanitation facility is commissioned. Women members of each household who are more involved with water related activities are selected. This study is confined to Kahun VDC of Kaski district so that the generalization may not be applicable to other parts of the country.

## **1.6 ORGANIZATION OF THE STUDY**

This study has been organized in to eight chapters one deals with background of the study, statement of the problem, objective of the study, importance of the study, limitation of the study and organization of the study. Chapter two presents definition of drinking water and sanitation, programme, review of the previous studies. Chapter three deals with introduction of the study area and

research design. Similarly, chapter four presents general background of study area and physical setting. Chapter five presents socio-economic and demographic characteristic of respondents, chapter six shows participation of women in programme, impact of water supply and sanitation programme on women's life. And last the chapter eight presents summary, conclusion and recommendations.

## **CHAPTER TWO**

### **REVIEW OF THE LITERATURE**

#### **2.1 Definition of Drinking water and Sanitation Programme**

In Nepal, various NGOs/INGOs have been working in the sector of drinking water to provide safe water as well as create awareness about sanitation. For instance, these organizations that with aims to reduce the time and provide various activities such as, income generating activities non-formal education etc for uplifting the property in the grassroots at their projects site associate with some other project. Among them NRCS has been playing catalyst role in the rural areas with the co-operation of Japanese Red Cross Society since 1983.

Drinking Water and Sanitation Programme has two types of implementation phase. Among them one is software part and other is hardware part.

Nepal Red Cross Society Kaski is working as mediator between fund providing agency and Water User's Committee. Who is Community Based Organization (CBO). In the first stage Red Cross Society Kask has organized a mass meeting. In this meeting every household representative including all VDC level stake holders are attending. In that day the mass has formed a water users starting committee and the starting committee is registered in district water resource office. After then the community has started first phase programme that is called software part as well as development phase. The software part programmes play the vital role to create awareness to the whole water users group around the scheme areas on health and sanitation and cash contribution for the whole programme implementation. It gives the water users group an

ownership towards the scheme. In that software time the water users group is being more conscious to make community action plan (CAP) for the whole programme implementation period. It is the most important procedure. So it is also called programme policy and norms. In that policy all terms and conditions are mentioned. The water users committee is the main responsible leader. Who leads of whole scheme according to the CAP policies and norms. The programme has a remarkable policy where 50 % people participate in the project. In that software period every household contributes 5.5 % cash contribution among this 2.5 % fund for the hardware structure construction and 3.5 % fund for project maintenance after the project implementation. In this way the collected fund is deposited in community saving account. The 5.5 % budget must be collected according total estimated budget. This allocation of budget must be according to the Rural Water Supply and Sanitation Fund Development Board (RWSSFDB Kathmandu. In this programme RWSSFDB provides fund 1300 NRS per head. Besides, this Sanitation Revolving Loan Fund (CRLF) provide for the sanitation unit (latrines, washing platforms construction) for those who do have not latrine in their household. The programme also provides 10,000.00 rupees in the community "women group" who are in scheme coverage areas. In that community only women are involved. They form a starting committee by the method of inclusive where 100 percentage women are involved. The committee makes rules and regulations then after the group is registered in district administration office.

After one year the programme moves ahead with the hardware programmes. It is also called construction part. In the period of construction, water users committee buys cement, iron, HDP and polithin pipes, sand, concrete, tools of digging and other construction materials. The scheme area contains different type of construction units. Among them catchments is one of the first and most important structures it is also called collection chamber. Where from begins the water supply in other parts. After then, different of some distance Reservoir Tank (RVT) which is also called ferro cement tank is

constructing as a rounding home. Ferro cement tank are different sizes at least 1 cubic meter to as it's depends upon the population. In the base of ferro cement tank whereas use of chicken wire, some bamboo, cement and sand. In the time of construction curing process is very important. After 15 days tank is ready to avoid bamboo. Inside in to the tank out let and in let pipe fittings are installed. Between reservoir tank and tap stands (BPT) Break Pressure Tank and Wash-out are constructing. Break pressure tank helps to maintain to water flow force and wash-out helps to clean water whereas clean water is transferring to the tap stands. Seven to ten houses between one tap stand is constructed. The entire household member is carrying water from this tap stand. Over flow water from the tap stand is manage the nearest house by utilization in kitchen garden and they produces green as well as fresh vegetables.

## **2.2 CONCEPTUAL FRAMEWORK**

In drinking water supply and sanitation programme women's involvement is more effective whereas all women involve in the programme from started to implementation period. This type of participation helps to sustain of the project. In this way we can see in this conceptual framework impacts by the women involvement in the programme and changes. Not only in drinking water and sanitation women's involvement but also their importance role remains in policy and decision making role. It is the best policy of implementing agency.

## **2.3 REVIEW OF**

## **2.3 REVIEW OF THE PREVIOUS STUDIES**

The Nepal Living standards Survey, 1996 conducted by central bureau of statistics of Nepal Government (G/N) estimated that about 33 percent of households of the country have access to piped water (supposed to be safe water). Nearly 66 percent of the households depend on wells which are not acceptable from a health point of view. About 21 percent of households depend largely on unreliable sources like river and spring water.

The access to piped water varies significantly with regions, urban and rural parts of the country. Only 31 percent of rural households of the country and 4.4 percent of the households in the Terai have access to piped water supply. Majority of households in terai (97.2%) receives water from well and land pumps that are not at adequate depth for yielding safe water. In the mountains and the hill regions, a considerable proportion of households depend on other sources like river and seasonal spring water (NRCS, DWSP.1998/99).

The state of sanitation in the country is poor. However, considerable improvements in sanitation (access to latrines) have taken place in recent years, the reported increase on overall sanitation (latrines) coverage from 19.8% in 1996/97 (NFHS1993, date of 1991: rural areas 16.3%; urban areas 69.8%) to 22.5 in 1996/97 (NFHS, 1996 rural areas 17.55; urban areas 61.4%) is meager (Nepal state of sanitation report 1999/2000 National sanitation Action Steering Committee Kathmandu).

### **2.3.1 Nepalese Women**

Development is not possible without participation, and without women's upliftment no development programme could benefit the total mass" (Luitel, 1992).

This statement is a challenge for development policy makers, planners and implementers. According to a country profile published by United Nations, the total population of Nepal was 18.5 million in 1999 and females constituted 50.1 percent of the total. Women as a productive force only came to be recognized in the early 1980s, influenced largely by the 1975 Mexico Declaration, and subsequently by the 1985 Nairobi forward looking strategies.

Women's concerns and issues also become accepted as part of the national development plans and programmes. The Sixth Plan (1980-1984) for the first time included a separate chapter addressing the importance of women's participation in the development process and made provisions for implementation at some relevant programmes. An important approach adopted by the Government of Nepal towards enhancing women's development has been the creation of Women's Development Cells within relevant ministries and launching the activities directed towards those goals. In June 1993, the Children and Women Development Section was established within Population Division of the National Planning Commission to serve as a focal point for all activities related to women's development.

Despite the various measures that have been initiated and implemented, women's participation in almost all sectors remains very limited. There are different factors that hinder the women participation in development activities IIDS reports state that "With limited education and skills, and few formal opportunities, majority of the women in Nepal are primarily involved in self-employed activities as a means of supporting their families. Women, on average, work for 10-11 hours, of which about four hours is spent on domestic work. Unless time saving technology for traditional household chores is introduced, women will never have free time to involve themselves in any activities; Women's lack of education is another factor that is responsible for the lower participation of women in the formal economical activities".



USAID Nepal 1998, fact sheet supports that Nepal's literacy rate is one of the worst in the world, making illiteracy a major hurdle to development and the empowerment of women and an engine of development. women's empowerment is the key to their productive and reproductive lives, and sustaining families and communities in Nepal.

"Women's lives in Nepal are shaped by two forces, beliefs and customs of the group to which they belong." Culturally, women are expected to be in the home and not involved in public or community activities, Lack of education awareness, motivation and social cultural barriers are along with economical barriers is the major reasons behind women's low participation in formal organizations. Though the women want to come forward men have not allowed doing so (SDC, 1995).

In Nepalese society, men are predominantly the ones who interact with outside world, while women's major sphere of operation is within the household (Stri Shakti, 1995). Following statements show that condition of women in Nepal is poorer than men. " Women carry a triple burden in the society: as production worker she contributes directly to subsistence and income; as a mother and spouse she cares for the family members and children, as a community worker she gives all her leisure hours and labor to society"(Acharya, 1997).

Women are very much involved as water carries and users. They should be brought into the discussions about the design of facility. They need insight into the construction of a water system, the rules and procedures concerning its repair. They should also be provided the training with the required skills to carry out minor maintenance (Bolt, 1990).

Causes of patriarchal women are always being powerless in every sector like economic, political as well as decision making role. Kamala Vasin Kali for Women (1993) what is participatory?

The involvement of women in all project –stages and at all levels, by building their roles in domestic water supply and sanitation, can be a contribution factor to the achievement of short and long term benefits of water supply and sanitation improvements.

#### **2.4. Concept of Women's Involvement in Water Supply and Sanitation in Nepal**

In 1981, the "S" for sanitation was added to the name of the project which was called " community water supply (CWS) only. In the first period 'sanitation' was limited to construction of latrines only. Later, the need was felt to add a health education component, the first sanitation pilot project was started in Rukum District of Mid- Western Development Region in 2986 households. Sanitation was extended to sanitation and women involvement in 1988 in Central Development Region.

The concept of people's participation became institutionalized toward the mid 80s and the importance of the role of rural women was recognized, but it is only since 1986/ 87 that more emphasis is being give towards involvement of women in all stages of realizing a water supply system and its operation and maintenance.

From 1988 onwards, a new approach was developed with the involvement of beneficiary women in the sanitation programme. This approach originated from the growing realization that women are mainly responsible for water handling, Therefore, their active involvement as in sanitation masters is

absolutely necessary. It implies establishing inter-linkages between sanitation; health education and women involvement and developing and organizational set-up for the implementation of a sanitation and women involvement programme with the assistance of UNICEF.

## **2.5 Women's Participation**

According to HMG/N and ADB (1996) women play a significant role in the Nepalese economy. According to the 1991 census women constitute 71 % of the labor force in agriculture. They also generate most of the average household's income than men do (55% compared to 44% by men and 6 % by children and they work on an average 10.8 hours per day compared to 7.5 hours by men). The status of women study completed in the early eighties established that women and girls together contribute more than 53 % of the household community income in rural household of Nepal. Several studies (Strishakti 1995, Ojha 1989, MOA 1993, 1994) have confirmed that women's labor contribution to Nepalese agriculture is substantial of at least equal to that of man. Acharya and Benette (1981) conclude that females contribute 51.6% of the labor to run farms. Farming activities in calculation include crop farming, kitchen gardening, livestock and forestry. Likewise, rural women spend so much of their energy and time in fetching water from long distance yet only 48% of rural women as compared to 68.8 % of men are reported economically active in 1991 census.

Despite their continued socio-economic disadvantages women have traditionally been the managers of domestic water supply in rural Nepalese community. Women and children in most rural communities often have to walk miles to collect water in mountain, hills and terai. The maximum trip (Mid-Western Development Region of Nepal 1995) has been reported even up to 5 km in some rural areas of hills and terai (HMG, 1995).

The directives and the eighth five- year plan make women's involvement in user's committee groups. It is specifically targeted during the applied social preparation strategies and orientation training of staff on social development skill and understanding of cultural values and gender behavior seek to be developed in the eighth plan.

## **2.6 Positive Impact of Women's Involvement on DWSS Sector.**

Evaluation report on women's involvement by UNICEF Nepal (1991) states that the activities carried out under women's involvement and sanitation component have created a positive change in the general status of women due to training, exposure, provision of knowledge and skills and by enabling them to participate in the formal process of development within its short history.

The concept and programme focus on women's involvement in water supply and sanitation requires different measures of achievement. A comparative study of the baseline survey carried out in Aug. 1997, before launching the program and the evaluation survey done in June, after the programme in Dolakha showed a marked difference in health and sanitary situation of the village and the villagers (New Ear, 1991).

The PEM project on rural water sector in Nepal (199), states the during the field interviews women's confidence has been raised through their involvement in water user's committees on matter of direct concern in them (ADB, 1997).

With the experience of the improved behavior through women's involvement in CWSS programme, Bolt (1989) in her proposal of 2 years intensive women's involvement programe highlighted the role of women as carriers and users should be brought into discussions about the design of the

facility which they needed insight into the construction of water system and in the rules and procedures concerning repair. They should also be provided with skills to carry out minor maintenance. There are many views regarding women's involvement in WSS. Helvetas sees woman's involvement in broad senses. The particular objectives of women's involvement are the following (CWSS/ Helvetas 1989):-

- ) To enable the women to voice their ideas and problem in the water user's committee.
- ) To make women and through them the children aware of personal and environmental hygiene, sanitation and water matters.
- ) To encourage women to use the time gained from water collecting for other activities, to raise their living standard.

The research studies made in the areas of problems of women development indicate that fetching water comes under daily routine work burden of 10.81 hours per day, provision of drinking water facility within reasonable working distance by involving women is ranked as one of the priority areas of concern under the activities of women development policy and programmes in Nepal.

The World Bank (1993) puts great emphasis on the conservation of water sources. The implication is that women as agents of conservation will pursue water savings in their role as domestic providers of water. Both Agrawal (1992) and Leach (1992) argue that women are indeed active user of natural resources and through their use they gain (depending on their class and genders experiences) some knowledge of the natural resource base (Leach, 1992).

A focus on women's role also tends to lead to prescriptions of integration into sectoral initiatives as conventionally defined. This comments

women's interest as those determined by their position within prevailing genders divisions of labor. This characterized the (PROWESS) here having catalogued women's participation in such sectoral activities should be actively encouraged. Leach (1992) argues that this approach, with its assumption of women's role as natural and unquestionable, adopts, a reinforcing rather transformation stance concerning gender inequality. Within the World Bank policy paper, there is a tendency to chronicle and compartmentalize women's roles. The Bank argues women play a central part in providing managing and safeguarding water (World Bank 1993). They essentially manage at the household level and have a traditional role in securing water and thus a potential role in educational training.

By involving of women in water supply and sanitation programme. Women and children have been benefited most from the project because providing water for the family is generally their responsibility in rural Nepal. This has saved their time and energy, and improved their general health condition and that of their children. Women can devote some more time to reproductive activities and particularly to childcare and the improvement of their home (ADB Nepal, 1997).

Tacder (1992) stresses that women's role have basically remained unchanged particularly in the water related activities, water fetching, cooking, food processing cleaning, kitchen gardening, etc in which water is involved. Thus this reflects seasonal fluctuation even greater in the absence of any planned water supply source without women's involvement.

In order to involve women, Ghimire and Neupane (1992) stress that achievements in community based water supply schemes with women involvement and health education are possible in Nepal with committed effort from all the parties concerned. Therefore, the concept of community rural

water supply with women's involvement and health education should not look towards the capital cost recovery.

In August 1992 Nepal Government and UNICEF signed a new programme of co-operation for 1992-1996, the master plan of operation (MPO). It has nine specific objectives with respect to community water supply and sanitation with women's involvement. The two major quantifiable objectives are:

- ) To increase access to safe drinking water to 50 percent (35 percent of the rural population by 1996)
- ) To increase the rural population's access to knowledge about personal, domestic and environmental hygiene and safe disposal from about 3 percent to 12 percent by 1996.

The strategies for implementing the programme were formulated in a policy directive issued by MHPP in early 1996. The basic principles are:

- ) Community based approach with community management and ownership.
- ) Women's empowerment with the involvement of women from the very initial stages of planning and design.

Likewise, His Majesty the Government developed mandatory guidelines for planning and implementation of sanitation programme in 1994, which states:

- ) Women should be encouraged to participate in the decision making on water management, hygiene education and promotion of sanitary facilities.
- ) These will be carried out to the villages, through women motivator.

- ) In all sanitation trainings and awareness creation activities special focus will be given to addressing and involving women at community level.

The self-reliant drinking water programme (1995) wishes to continue their co-operation in supporting the people of the Western Development Region as per agreement. Its overall goal is to reduce the burden of water collection of especially women and girl children by making the provision of drinking water and sanitation related diseases by providing adequate quantity of clean drinking water and promoting environmental sanitation.

Among its specific objectives, one objective is to empower the role of the community in general and of women in particular by involving them from the very beginning in the planning and decision making process. Likewise, its basic principle is gender equality; which strives to enhance the traditional role of women in the water sector by fulfilling women's practical as well s strategic needs. This is to be done by involving women in project planning, decision-making, implementation and maintenance activities. Moreover, women are to have equal access to resources.

## **2.7. Drinking Water and Sanitation Sector and Nepal Government Strategy**

The importance of safe drinking water and sanitation has been sufficiently underlined in the recent literature. The adverse consequences of lack of safe drinking water and adequate means of sanitation of productivity, health and quality of life are obvious and widespread. Therefore, Nepal's Government of Nepal (NG) has made efforts to provide safe drinking water and sanitation, with increased emphasis since the inauguration of the United Nation's International Drinking Water and Sanitation Decade in 1981. In spite of the repeated emphasis on the provision of drinking water and sanitation, the



coverage of water is only half of the total population, and the level of service is also poor.

) The eighth plan (1992-97) is the first periodic plan implemented after the introduction of democracy in the country in 1990. The plan pointed out that in spite of several programmes launched in the area of drinking water and sanitation under previous plans, a large segment of the country's population are still deprived of these services.

) The eighth plan recognized the previous weaknesses and pointed out some important policies which includes: i) more involvement of local governments in rural water supplies; ii) increased community participation in all aspects of rural water supplies; iii) cost recovery for operation and maintenance, and more structured approaches to capital subsidies to rural water supplies and latrine programmes; iv) more use of private sector, including NGOs and v) higher preferences to smaller drinking water schemes

) The eighth plan stipulated the target of providing drinking water facilities to the entire population of the kingdom in the next 10 years. Based on this long term target, it specified sectoral target as follows:

- (I) Provide drinking water facility to 72 percent of the population: 72 percent in rural areas and 77 percent in urban areas; and
- (II) Provide basic knowledge and services related to personal and domestic hygiene and environmental sanitation to 13 percent of the total population-nine percent in rural areas and 48 percent in urban areas.

) The ninth plan (1998-2003) also puts emphasis on the provision of drinking water and sanitation. In order to achieve the target of providing pure drinking water facilities to all by the end of the Ninth Five Year Plan, the budget of the FY 1998/89, assumes to provide drinking water

to additional eight percent of the total population of the country. Like the eighth plan, the plan emphasizes on the involvement of the NGO and private sector, including general public in the drinking water and sanitation programmes.

) The policies set out in the eighth plan regarding the role of NGOs in national development are as follows:

The participation of private and non- government organizations will be expanded in the field of social and economic development as these organizations are more effective from the point of view of cost flexibility, motivation and dynamism in the implementation of development programmes (NG, NPC, 1992 p.719).

Apart from development works, social organization and institutions will be encouraged to focus their activities on empowering the weak and helpless people, classes and communities of the society of lead a life of befitting of human standards; on increasing the participation of women in development on developing appropriate technologies, its transfer and use; and on conserving the environment (Ninth Plan p.720).

## **2.8. NRCS's Involvement in Drinking Water and Sanitation**

The Red Cross and Red Crescent seek to prevent and alleviate human sufferings through relief and development works. In the early 1980s, the international conference of the Red Cross urged the national societies to undertake developmental activities in addition to their conventional services, with a view to supporting the national programmes of the respective governments in alleviating human sufferings. Accordingly, apart from disaster relief and other conventional services, Nepal Red Cross Society (NRCS) has

been implementing development programmes with co- operation of several participating national societies (Sister Societies) and other agencies in the country.

Initially, the community development programmes of NRCS were launched without focusing much on the vulnerability aspect because of the difficulty in distinguishing between relief works and development works in the third worlds. However, the second development plan (1992/93-1996/97) of NRCS brought into focus the vulnerable as well as of enlisting their participation in the programmes addressed to them, and the sustainability aspect of the NRCS programmes and activities. Followed new direction in its strategy setting basically guided by the strategic goal of improving the situation of the most vulnerable as embodied in the strategic Work Plan of the Nineties of International Federation of Red Cross and Red Crescent societies (IFRC, 1994). The programmes in the plan have been especially designed to address the vulnerable groups so that they get to live at least at the minimum level of economic security and in human dignity (NRCS, 1997).

As a pioneer organization in the field of implementing community development programmes, NRCS established a Community Development Department (CDC) in 1988 which currently runs three programmes; i) Community Development Programmes (CDP), ii) Drinking Water and Sanitation Programme (DWSP), and iii) Community- based First Aid (CBFA) programme.

Drinking water and sanitation programme (DWSP) has run Nepal Red Cross Society (NRCS) in 1993 with the assistance of the Japanese Red Cross Society (JRCS). UNICEF has provided partial support to the programme. Its origin dates back to 1983 when the NRCS implemented Primary Health Care and Drinking Water Project (PHCDWP) in 12 districts with the aim of

improving the quality of life through the provision of drinking water and primary health care in the rural areas of the country (NRCS, 1997).

### **Concluding Remarks:**

In this research study various literatures have been reviewed. These literatures point out only women's participation in drinking water and sanitation programme. It concludes that various research studies have been made in the area of women's participation in drinking water and sanitation. The sixth plan (1980-1984) for the first time included a separate chapter addressing the importance of women's participation in the development process and made provisions for implementing some relevant programmes. It is the example as a model whereas women's participation on every development process has been successful.

In fact in the discussion about women's participation on development process women are situated in low priority. When the nation has major problem is that can't equal participation between male and female. Then women participation is not important in practically. The study directly shows that women are not involved in decision making position like chairperson, secretary. Because women are dominated by patriarchy system which is guided our society.

The government of Nepal declares recently 33% women must be involved in every sector but women none agree because theirs voice is that equal participation. Why we are becomes weak through the government eyes. Even it is the not only problem of our country but also it covers whole world. So, that its impact becomes more poisons as alcoholic. When the human nature couldn't be changed towards the importance of women role then we wouldn't expect changeable development stage in every sector.

It is very important to investigate and find out the condition of the women' participation in the case of drinking water and sanitation project in the country which can play vital role to solve the problem of equal participation and to raise women's participation in community development work in our society.

## **CHAPTER THREE**

### **METHODOLOGY**

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

The study area, Kahun Village, Development, Committee, is situated in Kaski district, Gandaki zone of Western Region Development. Under Kahun VDC ward number 1, 2 and 3 are selected for the study. Where Drinking Water Supply and Sanitation Project is launched by Nepal Red Cross Society, Kaski.

The villagers were highly affected by the problem of DWSSP five years ago. At that time in Kahun women were busy in search of water in many places like Kamere Kuwa and Phoolseni Pandhero They are tired of this situation and they think about DWSS in co-ordination with chairman of the sub-branch of NRCS Kahun VDC. Then the chairperson requests to district NRCS office to solve this kind of problem.

Women are main stakeholder of water collection and work as a children care giver. So, the women are highly conscious about women participation when they know about new DWSS implementing by the NRCS Kaski. Now this programme provides DWSS in 250 household of 3 wards. The researcher has made detail investigation by looking about women's participation access on DWSSP.

There are some causes for selecting in this study area by the researcher they are:-

- (i) The researcher worked as supervisor on this site under the NRCS, Kaski.
- (ii) The researcher has much acute intention.
- (iii) The programme has been completed in B.S 2063 but there is not sociological study about this programme.
- (iv) The study area is appropriate for the researcher according to time, resource and money. So the researcher has selected this study area.

### **3.2 Research Design**

In this study, both exploratory as well as descriptive research design have been used. This study has tried to explore the impact of water supply and sanitation programme on women's daily activities basically saving time and its utilization. This study has also described the socio- economic and demographic characteristics of the women, level of participation and role played by women in the study area.

### **3.3 Nature and Source of Data**

Both the primary as well as secondary data are collected and used in this study. Primary data are collected in the field, through interview and observations. Since women are the managers of water it is essential to learn their perception. The leaders, social workers, NRCS staff and the doctor of Kahun health post, staff of district water supply office at Kaski are visited as key informants. The district NRCS office provides information about the training it organized, the history of water supply systems, the interrelationship

between the office and the community etc. Likewise, water related diseases and its effect upon the people before commissioning of water supply are obtained from the Kahun health post. Other secondary data have been obtained from published and unpublished sources, literatures, journals, conference papers and reports, etc.

### **3.4 Unit of Study, Universe**

Women are the main stakeholders of water related activities and they spend more time than males do. For this purpose the researcher is mainly based focus on about women's participation and their role. For the purpose of this study, women water users (respondents) are selected from the project area and every household has been requested to provide a responsible adult woman. Besides, women motivators, village maintenance worker, village health promoter and women volunteers have all been included for the study. There are 250 households in this area. Among them 36 % household, which represents 90 household's women are taken as sample by the random sampling method. Those women who are more involved with water related activities such as water carrying and washing clothes were interviewed. As women are the targets for this study, the sample units are the women themselves.

### **3.5 Method of Data Collection**

In order to obtain necessary data from the field following methods have been used in this study.



### **3.5.1 Interview Schedule**

Structured interview is directly administered to the women water user, which also involved village health promoter, tap stand groups, village maintenance worker and women members of the user's committee according to the written schedule. Such interview involves the use of a set of predetermined questions. The interview schedule comprises the set of questionnaire to meet the objectives of the study. Thus, it is kept in mind that the target of the questionnaire schedule (survey format) is to obtain the personal and family characteristics: caste/ ethnic composition, saving of time to fetch water after launching the programme, use of saved time and impact about the health and hygiene education.

### **3.5.2 Key Informants Interview**

Unstructured interview is administered to the user committee members, DE of district water supply office Kaski, head and AE of NRCS office and the doctor of Kahun health post, as the key informant. The flexibility of the unstructured interview helps to bring out the effective aspects of the subject's responses and to determine the personal significance of his/her attitude.

### **3.5.3 Observation**

While interviewing, the researcher has observed and recorded the changing lifestyles of the people after getting the water supply facility and household sanitation activities and involvement in decision-making role of women in this field. Similarly, the researcher also observed operation and maintenance of DWSSP facility. Surrounding conditions of the neighboring

household deprived of piped water system are also compared with the ones having systematic DWSS project facility.

### **3.5.4 Focus Group Discussion**

The researcher conducts focus group discussion methods in the study area with the literate women, illiterate women and steering committee and health personnel.

## **3.5 Tools of Data Collection**

### **3.5.1 Questionnaire**

Mainly, structured and semi-structured questionnaires are used for the collection of data for selected households. Question schedules are developed to conduct the interviews with the respective respondents of the study area.

### **3.5.2 Key Informant's Checklist**

Key informant's checklist helps to find out fact in the research and to find out detail information about the study area.

### **3.5.3 Observation Checklist**

The observation of research takes an inevitable role in this research to find out the fact of impact on drinking water users as an observer.

### **3.6 Data Analysis**

Both the primary and secondary data are processed and tabulated. They are analyzed by descriptive way as mentioned above in the research design. The data were qualitative and quantitative which are processed by the statistical program of social sciences (SPSS). Bar diagram, pie- chart and percentage method are used to describe and analyze socio-economic and cultural condition and situation of the area related to water and sanitation, and the impact of the new water supply and sanitation systems. Various tabular comparisons are performed to analyze the population and number of households.

## **CHAPTER FOUR**

### **GENERAL BACKGROUND OF KAHUN VDC**

#### **4.1 Physical Setting**

Kahun VDC is in Kaski District of Gandaki Zone. It is located to north of district head-quarter. It lies 500 to 1500 meter high from the sea level. It lies between 28 minute to 13 minute north to 28 degree to 15 minute north altitude and it lies on 84 degree east to 84 degree 2 minute east longitude. It is surrounded by Pokhara sub-metropolitan in the east and south. Arbabijaya VDC in east, Balam VDC in North side. The famous Seti river is flowing to the north-west of this VDC, Kahun stream flowing to the south-east side and Kali stream is flowing to west of the VDC. (VDC profile: 2008).

The total population of Kahun VDC according to district profile 2002 was 2211 (1150 female and 1061 males). The total area of the study area is 6.50 square kilo-meter. The total number of household's number is 481. This VDC consists of various ethnic groups but the dominating groups are Brahmin (54.97 percent), Chhetry (27.25 percent), Gurung (2.31 percent), Kami (6.70 percent), Damai (8.55 percent) and Newar (0.23 percent). Nuclear family system represents the main basis of social structure (DDC Profile: 2002).

#### **4.2 Population Composition**

According to population census of (2001) total household number is 481 and total population is 2211 in which females are 1150 and males are 1061. The detail description is given below in table.

**Table 1**

**Ward - wise Population Distribution Each Ward of Kahun VDC**

WardNo	Female	Percentage	Male	Percentage	Total	Total %
1	203	18	185	17	388	18
2	246	21	226	21	472	21
3	127	11	123	12	250	11
4	67	6	51	5	118	5
5	69	6	69	7	138	6
6	61	5	55	5	116	6
7	108	9	109	10	127	10
8	117	10	107	10	224	10
9	152	13	136	13	288	13
Total	1050	100	1061	100	2111	100

*Source: VDC Profile 2008*

### 4.3 Ward- wise Household Distribution

In Kahun VDC, the number of household is represented with different ethnic composition. The wards differ in each other in caste/ ethnic composition.

**Table 2**  
**Ward Wise Household Distribution of Kanhu VDC**

Ward No	Number of Household	Percentage
1	90	19
2	100	21
3	54	11
4	24	5
5	27	5
6	28	6
7	52	11
8	44	9
9	62	13
Total	481	100

*Source: VDC Profile 2008*

### 4.4 Population Composition by Education

The study area is situated nearby Kaski district headquarter even there people can't understand easily about importance of education, poverty and low quality in education, lack of physical facilities. These are the important reasons which direct effect on quality education. Among 2200-2300 population, only 4 female and 42 male have completed master's degree out of 75 % literate population. Though, there are lawyers, lectures and teachers from the village there are one high school and two primary schools for the children study. For higher study they go to Pokhara and Kathmandu.

**Table 3**  
**Education Status of Kanhu VDC**

Education level	Female		Male		Total	
	Number	%	Number	%	Number	%
Illiterate	430	37.39	123	11.59	553	25.01
Pre- primary	6	0.52	7	0.66	13	0.58
Class 1-3	227	19.74	260	24.51	487	22.03
Class 4-6	133	11.57	110	10.37	243	10.99
Class 7-10	244	21.22	300	28.28	544	24.6
Class 11-12	33	2.87	113	10.65	146	6.60
Bachelor	4	0.35	42	3.96	46	2.081
Other	73	6.35	106	9.99	179	8.09
Total	1150	100	1061	100	2211	100

*Source: VDC Profile 2008*

#### **4.5 Population Composition by Occupation**

Main source of income is agricultural. An agricultural research center of Lumle had provided technical know how and skills for improved farming vegetables growing in large scale. Live stock and dairy are other source of income of villagers. Agriculture 30.8% service 7.99% Business 3% international labours and worker 4.8% household work 38.9% and 16 % are engaged other. There are of course some people who are working as civil servants in various line agencies.

## **4.6 Climate.**

The Kanhu VDC is in Kaski district of Gandaki zone. It is located to north of district headquarter. The climate is warm towards southern part. In middle part, we find sub-tropical climate and in higher part we find cold climate. Its maximum temperature is around 30<sup>0</sup>C in May to June and minimum temperature is below 7<sup>0</sup>C degree in January to February in winter. Main seasons are winter, summer, spring and fall. From June-August water falls in this area effect by south-west monsoon. Maximum rain fall is 3500 milliliter to 4000 milliliter. The cyclone that comes from equatorial line in winter season makes light rainfalls. During summer and spring seasons the climate is sub-tropical type that makes the climate very fine. The maximum land structure has turned towards sun light throughout the year.

## **4.7 Development Infrastructure**

### **4.7.1 Language and Religion**

Kaun VDC mainly comprises of people of Hindu and Buddha religion. Only people follow Buddha religion. Only 2.31 % people follow the Buddha religion.

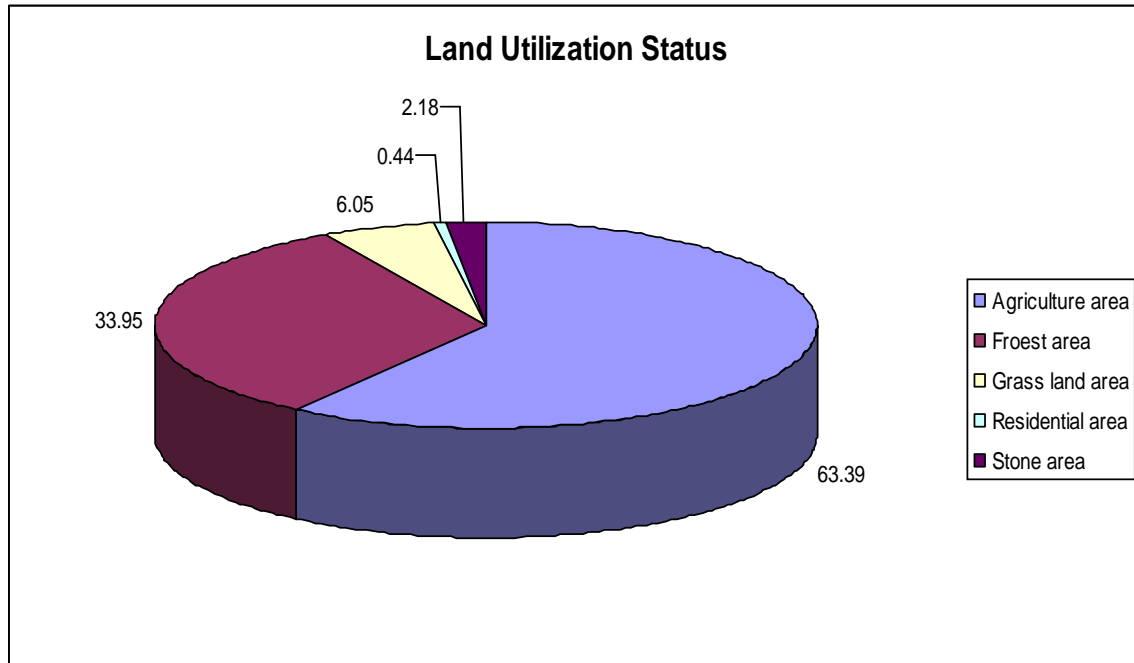
### **4.7.2. Geographical Structure**

**The** total cultivable area of this VDC is 63.39 % (304.45 hector). 33.95 % is covered by forest (163.05 hector), 6.05 % grassland (0.23 hector), 0.44% residential area (2.10 hector) and 2.18% stone area (0.47 hector). It has



more agricultural area than other areas so that geographical structure is appropriate for the agricultural development. There is high possibility forest based activities and income generating activities.

### Land Utilization Status



Source: VDC Profile 2008

Figure: 1

### 4.7.3 Natural Resources

The VDC has different natural resources among them the main resources are described here. General (*Kholsa*) of stream of the hill, green forest, neat and clean environment are more valuable here. Important trees are *Katus*, *Chilauni*, *Khaluk*, *Utish*, *Chap* and *Bamboo* in this area. Fruits tress like orange, banana, guava, peach, are found in this area. The wild animals and birds found in the forest are monkey, tiger, deer, parrot, *Jackla*, *Kalij*, *Titra* etc. The land is not plain so there is lack of productive land although the main crops are maize, millet, wheat, paddy, potato and green vegetables. Grassland area and fodder grass are also found in this study area.

#### **4.7.4 Religious and Tourist Area**

With the viewpoint of religion this village can be called a village of Temple, because here are a number of temples. Here in this village many temples like Santonashor temple, *Bouddha* temple, *Sarbeshor Mahadav* temple, Kalika temple, Radha Krishna temple and *Deurali Chandin* temples are in different wards of this VDC.

The famous tourist sport Kahun Dharara (Tower) lies in ward no. 9. Currently this is not cared well but it is taken as a pokhara view tower. And, other many charismas can see from the upper part of tower. From here not we can see the views of Pokhara city, sunrise and sun set. It also could be main tourism area when it renovated. So the value of this place would be increased as well as it become main source of development and main tourism area of this VDC.

Presently, the cultural and religious norms are in pitiful condition but *Balan* (the dance based on the birth and biography of Lord Krishna) has been practiced by the people of Kahun VDC. *Bhajan Kirtan* and folk songs has important place even today. The religious and cultural as well as social festivals for Hindus i.e. Dashain, Tihar, Teej, Janipurnima are celebrated mainly in the study area.

#### **4.7.5 Non Governmental Organizations**

It is not possible to develop village with only governmental organizations. Today's need is that all governmental and non- governmental organizations showed unite for the development of rural areas. Therefore, the

non-governmental originations working and contributing in this VDC are as follows:

- a. Village Development Programmes (DACAW)
- b. Mother groups

### **Condition of Women**

The social problem of women discrimination that is a national problem throughout the country has also been deep rooted in this village also. Women are illiterate and backward so that each and every problem's solution can't be made by them. Here the working hour of male member is 8 hours whereas women's is a tiring 16 hours. The conditions can be pointed as follows:

- (i) Adult women literacy- 44 %
- (ii) Infant mortality rate -0.17 %
- (iii) Working load -15 hours
- (iv) Rate of taking iron tablets during pregnancy-80 %
- (v) Immunizations during pregnancy -75 %

### **Condition of Children**

The requirement for the development of children i.e. child care, balance diet, health facilities and daily energy has not been provided properly that is due to the lack of awareness, economic problems and other activities.

- (i) Completely vaccinated children -95%
- (ii) Children receiving vitamin and polio vaccine – 96 %
- (iii) Children provided with iodized salt – 60 %

#### **4.7.6 Socio-Economic Condition of the Study Area**

The settlements of Kahun village are scattered. Houses are made of stone and mud with roof of zinc sheet and few houses are made of rod, cement and concrete. The living condition of villagers is not so high. Farming activities and forest management are performed jointly by the community people. There are systems of parma (exchange of labor), Katuwal (village messenger man), Kami (blacksmith) and Damai (Tailor) who are paid in an yearly basis contract. There are various committees in the village such as WUC, School Management Committee, Dairy Management Committee, Saving and Credit Management Committee, etc. There are three active mother groups and there is also an active youth club.

## **CHAPTER FIVE**

### **SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS**

Nepal is rich in water resources but most of the households of rural as well as urban population are beyond this facility. To provide clean and safe drinking water supply and associate with the health and sanitation knowledge many NGOs and INGOs have been giving high priority in the sector since the decade. Among them NRCS also plays the key role to provide the facility and one of the schemes of NRCS Kaski is taken for the study, which is Kahun Aadarsha Drinking Water Supply and Sanitation Project. To understand the socio-economic and demographic characteristics of the respondent this chapter deals with age structure, caste/ethnicity, occupation, head of the household, division of labor and women's work load and education status of the study area.

#### **5.1 Age Structure**

In Nepal, women are directly attached with the household chores and most of the times they spend a lot of time to fetch water. So, without women's participation none of the programmes of water supply achieve its target. For this concentration NGOs make the policy that women participation is a compulsion in water supply and sanitation programme. Then NGOs and INGOs involve women as a key component for the programme. Thus, an attempt was made to find out the distribution of the respondents by age group for which the table has been developed. The table no.4 shows the scenario of age that explicitly appears in different age group.

**Table 4**  
**Distribution of the Respondents by Age Group**

<b>Age group</b>	<b>No. of Respondents</b>	<b>Percentage</b>
17-20	4	4.4
21-30	14	15.5
31-40	31	34.4
41-50	24	26.6
51-60	17	18.9
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

**Figure: 2**

The age structure of the women water users identifies their work burden in fetching water. They do so according to their age and responsibility. Hence, the range of 31-40 age group represents 34.4 percent of total who hold more burdens to fetch water and highly responsible for household activities. They

have to show the keen interest and actively participate in the programme. Similarly 26.6 % women of 41-50 age groups participate in this activity. These two age categories represent the majority of the total. It is because they are physically sound and most of the time they carry the water and know the burden of carrying water in Kahun Village. Mostly the daughter-in laws fetch water. In Nepalese society, once the woman is married and goes to another house she is expected to do all the house works.

## 5.2 Caste/ Ethnicity

A wide diversity of caste/ ethnic composition is observed in the field. The researcher during the field study finds that the upper caste group and so called lower caste group of people live there harmoniously sharing all the benefits of the programme equally. The caste ethnic composition is documented in the table no. 5

**Table 5**  
**Distribution of the Respondents by Caste /Ethnicity**

<b>Caste/ Ethnic</b>	<b>Number</b>	<b>Percentage</b>
Brahmin	55	61.1
Chhetri	20	22.2
Lower caste (Kami, Damai, Sarki) KDS	7	7.8
Thakuri	5	5.5
Magar	2	2.2
Newar	1	1.1
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

### **Figure: 3**

According to the local people the settlement of Kahun village is very old. Out of the total respondents Brahmins constitute the highest proportion (61.1 %). Likewise Chhetris 22.2 %, Lower caste (KDS) 7.8 % , Thakuri 5.5 %, Magar 2.2 %, and Shrestha 1.1 % respectively. Among the total respondents, Hindu upper caste (Brahmin and Chhetri) constitute 88.8 %, so called lower caste group (Kami, Damai and Sarki) 7.8 % and Tibeto-Burman origin (Newar and Magar) constitutes 3.3 %.

### **5.3 Occupation**

An attempt is made to find out the occupation of the respondents. The researcher is interested to know the livelihood of the villagers. The figure given below shows the distribution of the respondents by occupation.



**Table 6**  
**Distribution of the Respondents by Occupation**

<b>Occupation</b>	<b>Number of Respondents</b>	<b>Percentage</b>
Agriculture, Livestock raising, housewife	81	90
Teacher	2	2.2
Service	3	3.3
Shopkeeper	4	4.4
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

**Figure: 4**

The women are also engaged in other activities, although the prime duty of women is related to household works. Majority of the household women are involved in agriculture and livestock beside household activities. Teachers and service holders are more taken as executives of *KamaKaji mahilas* contributing relatively less time to agriculture and other household works. Seasonal migration is quite familiar in this area. Migration is a form of geographical or spatial mobility, which involves a change of usual residence of a person

between clearly defined geographical units. The shopkeepers usually go to Fulbari and Mahendrapool Bazaar of Pokhara to buy their goods. Lower caste men frequently visit out site the village for the construction of the house as a laborer. According to these women, the main advantage of seasonal labor is to get income. Men's migration for work does have impacts on women as well. These women are reported to have more decision power over expenditure and running household matters' when men are absent. Most women, however, have to wait for their husbands for important decisions.

#### **5.4 Head of the Household**

Nepalese society is traditionally patriarchal society and guided by the Hindu Mythology. Many of the household decisions are taken by the males rather than females that are clearly seen in the upper caste group. Similarly, in the ethnic groups such as Gurung, Magar, etc females are take the household decisions.

**Table 7**

**Distribution of the Respondents by Head of the Household**

<b>Household Head</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Male	75	83.3
Female	15	16.6
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

### **Figure: 5**

The table 7 indicates that 75 (83.3 %) head of the household are males out of total 90 and 15 (16.6 %) households' heads are females. Thus, it is clear to see that the majority of the household heads are male and all the important decisions are taken by the males.

### **5.5 Distribution of the Respondents by Awareness and Education**

Most of the married women are illiterate until the village has started adult education program. Adult women education is being conducted in this area from time to time. Organizations such as District Education Office, forest user's committee, NRCS District office and water users committees conduct adult literacy classes in this area. Most of the women now could apportion their time to these classes due to easy access to water supply and sanitation facility. The time to fetch water now has been reduced due to a nearer source. These women are happy that now they can slowly read and write. Production Credit

for Rural Women (PCROW) is included in running the literacy classes. Though women literacy classes are conducted in this VDC from the very beginning, the women are not able to attend these classes due to long distance, the women have to walk long for the collection of water. But now they are able to attend literacy classes, and most of them are literate now. They have learned about increase in environmental degradation and its negative impacts on the subsistence families. Health nutritional, sanitation and educational problems of the women and children and its solutions are taught in these classes. Training course on livestock raising and vegetable growing and kitchen gardening is also taught in these classes. The women now know many new things because they are able to apportion time to these classes. The level of education of the respondents is shown in table 8.

**Table 8**  
**Level of Education of the Respondents**

<b>Education Level</b>	<b>Number</b>	<b>Percentage</b>
S .L.C	12	13.3
Test –Pass	15	16.6
Literate	55	61.1
Illiterate	8	8.8
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

### **Figure: 6**

While talking about the average education condition in the project area, most of the girls are sent to school these days. There is one primary school in this area. In this primary school the girl enrolment is slightly higher than the boys. The overall large increase in female literacy and primary school is extremely encouraging. The higher rural enrolment in primary school is due to the result of special development inputs. In one of the high school nearby the study area the girl enrolment is decreasing. Parents do not prefer their daughters for higher level education. This is because the parents think that women should marry early (when young) and bear children and look after her husband. The bigger girls are also considered valuable as workers in the household as well as in the fields. So education for girl is not considered a good investment.

### **5.6 The Traditional Divisions of Labour in Water Supply**

The domestic water issues/concerns and practice is a responsibility of women among all groups in the survey area. It is the women's responsibility to

see that there is enough water in the house for all domestic purpose. The daughter-in-laws, daughter, and any other female member of the family, including children have to participate in the domestic activities. The male carry water only if there is no women in the house or if the women are sick, during menstruation or delivery periods, during weddings, funerals or others social obligations and festivals. Thus, women's traditional role demonstrates that women have a potential role to play in the new water supply and sanitation projects benefiting both the project and women themselves.

## **5.7 Women's Work**

In the villages of the tasks are clearly divided between sexes. Although most the work assigned to women is the same for all the ethnic groups, there are some differences from one group to another.

All women take care of the domestic tasks/ household activities. This is considered their main occupation. Daily activities such as cooking food, cleaning the house, washing dishes, taking care of children (and other family members who need care) belong to women in a house. Women also participate in agricultural activities; prepare fields after ploughing, plant rice and harvest paddy, or other grains. They look after animals, clean sheds and bring and dry dung to the fields. Women store agricultural products, husk paddy (with dhiki), grind grain (with Janto) and prepare daily products. Women are the main responsible people for bringing enough water. The productive activities or works create new value, and usually only productive activities are given monetary value. Productive activities are also the activities that are calculated and taken into statistics for measuring the gross domestic product. Child-nursing tasks are usually considered as women's tasks. Washing children's, clothes and cleaning the house are also women's tasks. Reproductive activities are not usually counted into national statistics, because no monetary value is

given to this. This is much a socio-cultural issue; there are no natural laws telling the society which work is taken for granted and which is not. In this village, the women work both outside and inside home. Thus reproductive and domestic works are automatically productive, because without these activities a family cannot sustain daily livelihood.

In Kahun village it is found that men mostly plough the fields. Women collect firewood but they are not allowed to use axe but the use of knife (khukuri) is allowed. According to the villagers, an axe is not suitable for women in this village.

## CHAPTER SIX

### PARTICIPATION OF WOMEN IN PROGRAMME

This chapter deals with historical incidence of commencement of the WSS system in the area, factors for wanting a water supply system, role of users committee members, Interrelationship between the water user's committee and the DWSO, role and responsibilities of the WUC, importance of involving women in WUC, importance of integrating hygiene education, current source of water, Involvement of women as motivators, criteria for the selection of women motivator, involvement of women as caretaker.

#### **6.1 Historical Incidence of Commencement of the WSS System in the Study Area.**

Community is an area of social living marked by some degree of social coherence. A person cannot exist in isolation. He is linked in many ways to different persons who form a group. Almgren Sociologists, (1992) have developed an idealized notion that the existence of community is embodied in the village or small towns where human association are characterized as *gemeinschaft* that is associations that are intimate, familiar, sympathetic, mutually independent and reflective of a shared social consciousness.

The problem of a community is always identified through the formation of group. In Kahun village, the women's groups are organized to demand a new water supply project. This village did not have a proper water supply system before the commencement of new water supply project. The women had to walk almost an hour to reach the near water source. At one trip women fetched only one 'gagro' (bucket) of water. They were very busy in both domestic and



outside work. The long way, in which they had to fetch water, created additional work burden for these women. This led the women for wanting a new water supply project.

Two active women represent the local women and voiced their difficulties to the VDC chairman and the Chairman of Nepal Red Cross Society Sub-branch Kahun. Through the two chairmen and vice chairman, the felt need of the water supply system in Kanhu is requested to the NRCS office of Kaski. After requesting, the preliminary study is done by the engineers (based on demand led approach). The preliminary study include if there is a genuine demand for water supply and sanitation, real problems and good prospect of village participation. Labour is always in the interest of the well being of the villagers, including development works. Importance of group formation of women in community participation is very essential to launch a new water supply system, community participation is vital. Previous experiences have demonstrated that the water supply project launched without people's participation is seen ineffective. If the users of the village are participated in the community development activities then only they can have the sense of ownership. If the people feel that it is their duty to perform the water supply system they can be active in all phases of the project cycle.

A typical organizational hierarchy of the user's committee of Kahun is shown in the following diagram.

The main function of the user's committee is to help the implementing authority of WSS system to generate maximum people's participation and solve problems that arise during the implementation. It is now well understood that without people's full participation no development projects can become a success.

## 6.2 Factors for Wanting Water Supply System

Before the commencement of the water supply system, most of the family drank or used water for food from the nearby source, *kuwa* (*perennial water source*). There was high possibility of contamination because cows and cattle used to go to these sources. People did not know the knowledge of sanitation. To reach these kuwas named Kamera pani and Foolseni pandherao, they had to walk one and half an hour. And even when these kuwas were dried they had to walk about one and a half-hour to reach to another source.

Due to long distance most of the women were suffering from backache. Most of the women said that because they were very busy, the time to collect water had created additional burden. They could not apportion their time to literacy classes conducted by NRCS. Water-related diseases were very common in these areas, but before the beginning of water supply system the women thought that vomiting and headache were caused due to evil spirits, or witches (*bokshi*). The bokshis and evil spirits are quite common in Nepalese villages.

**Table 9**  
**Factors for Wanting a Water Supply System**

<b>Factors</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
To get rid from diseases	12	13.3
To lessen morbidity	5	5.5
To save loss of time	52	57.7
To reduce water carrying burden	21	23.3
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

### **Figure: 7**

The table 9 shows that the clear data about respondent's view as regards to factors for wanting a water supply system. The table clearly shows that 52 (57.7 %) respondents say that they spend most of their times of the day for fetching the water. They have no leisure time and feel tired. Thus to save the time and fetch water from short distance they request NRCS to launch the program. Also, 21(23.3 %) while asking the reason to wanting the programme say that they get rid of water carrying burden that they have faced. Similarly, 12 (13.3 %) want the programme to get rid from diseases and 5 (5.5 %) to lessen morbidity.

### **6.3 Role of Users Committee Members**

No water supply and sanitation project can be a real success without people's participation. As such the users committee plays an important role in the implementation of the DWSS program. The UC members in Kahun village

play an important role in providing free labor required for earthwork excavation and back filling in pipeline construction to the village. Furthermore, they also participate voluntarily in transportation of materials locally. It is understood that they have been playing an important role in formulation maintenance and operation of the policies. Nevertheless, the UC also conducts village meetings to raise funds for paying to maintenance workers and funds for incidental expenses. Lastly, all these phenomena of user's involvement have made the water supply system sustainable.

#### **6.4 Role and Responsibilities of the WUC**

For the purpose of planning and implementation, the water supply scheme is divided into three phases, namely pre-construction phase, construction phase, and post-construction or the service- delivery phase. After the initial request is done in demand led approach; the preliminary study is done and the users committee is formed. The basic purpose of introducing WUC is to give decision – making activities to the lowest units of social maintenance and construction of the water supply system. Regarding the role and responsibilities of the UC there, the VDC chairman of NRCS and WUC chairman are basically responsible for the overall management of the project. Besides, a vice-chairman supports the chairman and is acting chairman during the chairman's absence. Secretary is responsible in overall correspondence works, whereas a treasurer is responsible in keeping and maintaining all financial transactions and accounts.

For the sustainability of the programme many aspects are needed. The user's committee is the one that chooses village maintenance workers, women tap stand group, tap stand caretakers, and women motivators from the same village. After the pre- construction period, these people belong to the WUC during the construction and service delivery period. In Kahun the women motivators are

also the members of user's committee. The water supply project is always accompanied by the health component as safe water alone does not reduce water related diseases unless people are aware of the sanitation habits. The district NRCS office first conducts the sanitation motivators training. The water user's committee has responsibility to collect maintenance fund from the villagers. During the planning and construction phase the UC acts as an interface between the District Office and community.

Thus the partnership programme works best when the role of the each partner is clearly defined.

## **6.5 Importance of Involving Women in WUC**

Sanitation of the participation of local women in all phases and activities of water supply and sanitation project on particular has implications for informal exchange and training. In Kahun throughout the project the project staffs communicate as partners with the men and women of users committee and give meaningful consultation with local women by providing adequate necessary trainings. These women successfully impart their knowledge and experiences about health and hygiene to the women of the same village. The participation of women in sanitation project is of crucial importance. Women usually are more motivated to have sanitation facilities for reasons of convenience and privacy.

Women use water points for both domestic and productive uses. Productive activities include riving animal's growing, vegetables and growing fruits, brewing, post harvest processing and pottery.

**Table 10**

**Response Regarding Usefulness of Involving Women in WUC**

<b>Response</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Very useful	68	75.5
Useful	22	24.4
<b>Total</b>	<b>90</b>	<b>100</b>

**Source: Field study, Feb, 2009**

**Figure: 8**

A balance of men and women on committees achieve an equitable division of work and responsibilities between men and women. Women also should be involved in taking decisions along with men. According to Nepal Government policies, there must be an involvement of 33% of women in any organizations. Also, the treasurer must be a woman with in the committee. The women motivator performed better than men do. Most of the villagers are very happy that women are involved in many aspects of the community. The local

women say that they feel more confident talking to women about their problems and the women of water user's committee can understand their problems more easily than the males. Information from the villagers which is hoped to reach the leaders, or possibly higher up in society has many channels, some of them seem to be more direct while some are more of less discussions. The respondents are asked to tell about the information channel back and forth. However, user's committee is clearly the biggest element in both the top-down and bottom-up information dissemination system.

The village women can easily express their feelings and problems to other women and they can easily talk in-groups. Women in villages are still shy to talk to the engineers confidently. They are especially shy to talk about defecation habits. Talking openly about defecation habit is very important for the construction of a latrine. Most of the informal learning about water and sanitation takes place through interpersonal contacts between women.

## **6.6 Importance of Integrating Hygiene Education**

In every phase of behavior, practices and needs, the knowledge of the local people is fully used and at the same time the knowledge of the external agency (such as DO, NRCS) is conveyed to the people by the village health promoter channel. Many locally specific risks of transmission of water and sanitation related diseases are based on behavior which continues after the introduction of improved facilities. It makes the health education support programmes necessary, where such a program is added to the project frequently. It is the only part of the project on which women should also have to be involved compulsorily. Their practical knowledge of community practices, conditions and beliefs require that women be involved. Technology in itself is not enough to ensure reduction of sanitation related diseases. Sanitation is dependent on the way people behave and organize them towards hygiene. In



every phase of the project, health education can contribute to and understanding of behavior, practices, and needs. Participation of women in sanitation projects is of cultural importance because in our religion women are the ones who keep the facility clean, maintain them and train their children to use them.

## **6.7 Current Source of Water in the Study Area**

Currently, the source of water for Kahun village is a stream source called Daine Debre Khola Muhan, of Aatighar Mauja VDC which is approximately 12 Km north from the village. From this source water is brought in GI and Polithen pipe with 70,000 liter capacity water per day. Six reservoir tank are constructed at the top of the village called Batase, Basare, Ghimire Tole Ka, Ghimire tole Kha, Machari and Ghaire Ghare tole. Then through 21 public and 6 private tap-stand posts, the water is distributed to Kahun VDC ward no.1, 2, and 3. All this construction is completed by NRCS witin two years. Now water is regularly provided to 250 households of Kahun village.

## **6.8 Cultural Implications of Water**

The ascribed status attributed by birth in a Hindu system defines an individual's position completely and secularly in stratification. The low caste people like Damai and Kami are not allowed to touch by the high castes like Brahmins, Chhetris, Newars and even matwalis. Though in the cities due to modernization food touched by low caste is no longer regarded as polluted as far as eating in public place is concerned. The village cannot avoid his/her involvement with ritually polluted water in everyday life. The villagers perceive certain type of water as also polluting. While the physically polluted water is easy to avoid by majority, it is more difficult to recognize otherwise

polluted water. The villagers perceive running water, such as river and water flowing from the pumps or taps as ritually clean pure water. Kuwa water is also considered as pure, and there are restriction about who can touch and who cannot; for example the out castes untouchables are not allowed to touch and clean the taps directly. If untouchable castes touch the water facilities, taps/pumps or water pots, water will be polluted and cannot be used by twice born caste/varna. Due to illiteracy and orthodox belief, these things are still prevalent in villagers. They believe that evil eyes, spirits or witches (Boksi) can also pollute the water sources.

**Table 11**  
**Sufferer in the Family during WSS System Break-up**

<b>Response</b>	<b>No. of Respondents</b>	<b>Percentage</b>
Male	12	24.4
Female	73	75.5
Children	5	5.5
<b>Total</b>	<b>90</b>	<b>100</b>

**Source: Field study, Feb, 2009**

**Figure: 9**

Most of the women eagerly admit that women suffer most when something goes wrong in the facility, because women are more involved in water related activities which is clearly shown in above data 73 (75.5) percent women suffer because of the break-up of WSS system.. It is women's responsibility to look if there is enough water in the house. But 24.4 percent of women say that the male suffers most because males have to work outside the house and if there is no water they cannot have proper food so they become weak during their working periods. According to these women, women can walk to other sources if there is no water in the present source. The women say that the male suffers most is because their husbands are engaged in offices and have some business, so they would come late to their houses. However, 5.5 percent of the women say that children suffer most because they are small and they need food more frequently. They cannot tolerate their thirst as adult people can.

## **6.9 Involvement of Women as Village Health Promoter**

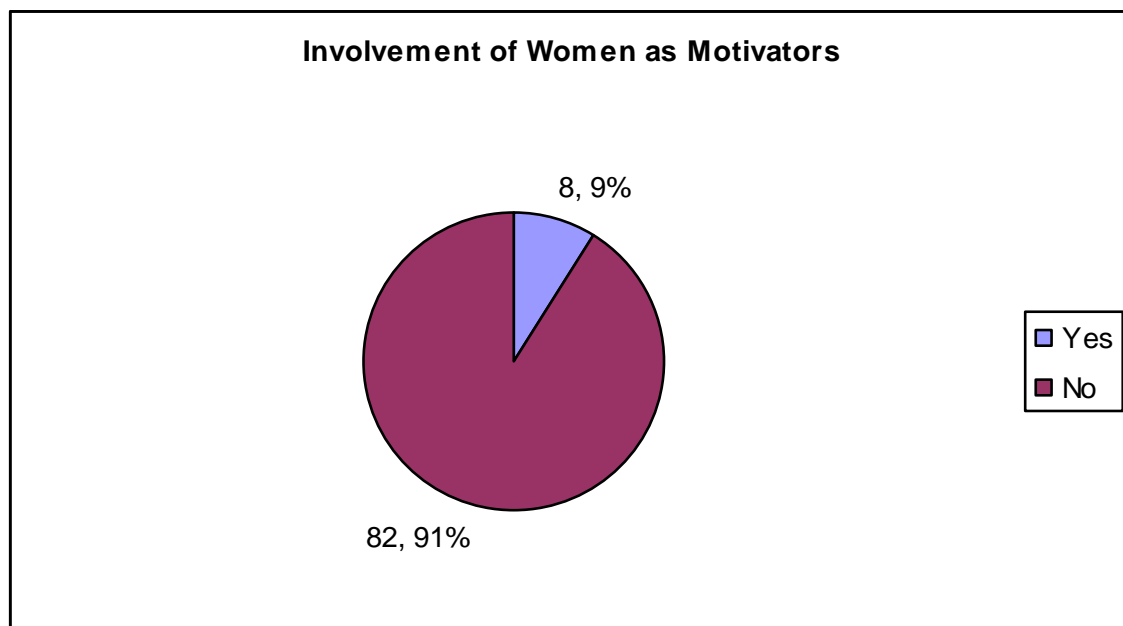
A leader is a person who is both respected and obeyed by these followers. Education is an important determinant of leadership. The village health promoter acts as a leader and teaches villager women about sanitary habits. Thus for this, village sanitation motivator are guided, supervised and reoriented as necessary by the implementing department. The village health promoters of Kahun village are teachers. They are also the members of user's committee group. They are instructed various methods of interaction in the training provided by the water and sanitation programme. They are actually treated as future teachers on conveying messages on hygiene and sanitation. Furthermore, they are also instructed on how to conduct meetings locally, and how to motivate villagers to build private low cost latrines. After completion of the training the motivators are assigned for a monthly remuneration of Rs 800. Thus the district office more than the technical part, has been functioning to do

sociological tasks by motivating villagers for development works, by giving them adequate training. They are trained minimum once together with women motivators and other water supply projects. Responses regarding involvement of women as motivators are shown in the table below.

**Table 12**  
**Involvement of Women as Village Health Promoter**

<b>Involvement</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Yes	8	8.8
No	82	91.1
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*



**Figure: 10**

During the programme period the women are asked whether if they play the role of motivators. Very few (8.8 %) say that they are involved as motivators while 96.5 % report that they do not any such roles.

### **6.9.1 Criteria for the Selection of Village Health Promoter**

As a part of the program, district water and sanitation section has been regularly conducting training for women motivators and women volunteers. The women motivators are selected from the village meeting considering the following criteria:

1. She showed have regular contact with community members
2. Is a resident of the village
3. Is she educated and does she have the potential to explain clearly? and
4. Does she have time for involvement in the programme?

The women motivators of Kahun village are enjoyed in social services. One of them has passed SLC and the others have passed SLC send -up exam only. They are also the members of user's committee. The DE and AE give training to these women. During the one –week training session, they are instructed various methods for interacting villagers.

### **6.10 Involvement of Women as Village Maintenance (Caretaker)**

At present there are 21 women involved as tap stand caretaker. The user's committee has chosen these women. Women's involvement as tap stand-caretaker for 21 women out of the total women surveyed. These women (tap stand caretaker) use to operate, maintain, and clean the areas of taps as well as encourage other participants to make the surrounding clean. These women are given training on the hygienic transport and use of water from the sources to the point of final use. The covering of containers during carrying and storage and the prevention of contamination through touching the collected water and its negative effects are important information of the training. Raising awareness of the need to take measures to safeguard water is an important part about community action. The stand post caretaker's role often includes promoting the

careful and hygienic use of taps. The advantages of a well – maintained and safe supply of drinking water can have many positive implications of overall health and hygiene. The training is provided by water and sanitation section of the district office, duties of tap stand –caretakers are:-

1. To clean the areas near the taps and tap stands.
2. To be involved in cleaning activities of the village.
3. To motivate other people and children in cleaning activities.
4. To maintenance and manage the water supply system.

These volunteers are given training on site in project area. They are trained once at the beginning of the project and frequently as necessary.

## **CHAPTER SEVEN**

### **IMPACT OF WATER SUPPLY AND SANITATION PROGRAMME ON WOMEN'S LIFE**

This chapter deals with benefits (economic benefits, social benefits and project benefits), effectiveness of the WSS project on women's involvement, changes toward sanitation and community cleanliness, hand washing sanitary habits, change in defecation habit, change in bathing habits, protection of water from contamination, overall effect on health and hygiene, change in the way of thinking, awareness and education, community feeling, Impact of women's involvement in WSSP and involvement of women in decision making.

#### **7.1 Benefits**

After the intervention of new water supply systems people in the rural areas has have opportunity to take the benefits from the related activities. Such types of benefits are analyzed as follows:

##### **7.1.1 Economic Benefits**

The introduction of improved water supply and sanitation has welfare benefits particularly, when time and energy spent by women on water collection and water disposal is reduced. Potential economic benefits from the time saved in fetching water is closely related to the extent of women's involvement in domestic, economic and community development works. In many rural areas, women are actively involved in agriculture, particularly food crop production and processing, and in animal care (Acharya and Bennet 1981).

Women are also the main users of water and wastes for household economy, for example, in vegetable gardening, animal husbandry, brewing and soon.

### **7.1.2 Social Benefits**

Time and energy gained from reduction in water collection can be used for community development and educational activities. In some areas, when time permits, women make the largest contribution to community self –help projects. Lack of time is often a major constraint to their participation in non – formal education. Water and sanitation related diseases are responsible for most of the morbidity and mortality in developing countries (NG / MHPP 1994, UNICEF1992, 1996, 1983). The use of more water of improved quality and safe methods of excreta disposal, adequate personal hygiene, and food hygiene by all members in the community can lead to significant reduction in these diseases and their treatment for individual households and for government and reduce the human suffering associated with them. Women play a key role in this process because traditionally, they manage domestic water and households hygiene, educate and care for young children, produce health care in their household and often in community and make decision on use, and maintain of water supply and sanitation facilities.

### **7.1.3. Project Benefits**

Women's traditional role describes the obvious rationale for involvement of women in the introduction of improved water supply and sanitation arrangements for operation, maintenance and health education. The literature reviewed indicates that many of rejection and problems in the functioning and use can be explained, either partly or fully, by insufficient attention to the traditional roles and position of women, and that the women have had sound



reason for non- use facilities. The project focuses on providing the means for rural villagers and especially women to take the lead in decision- making at critical stages, in implementing their decision and in collective sharing of benefit (World Bank release No.96/30 EAP). As prime beneficiaries, women have promoted the interest and willingness of men to contribute to improving water supplies and installation of latrines (CWSS, New Era, 1991).

## **7.2 Effectiveness of the DWSS Project on Women's Involvement**

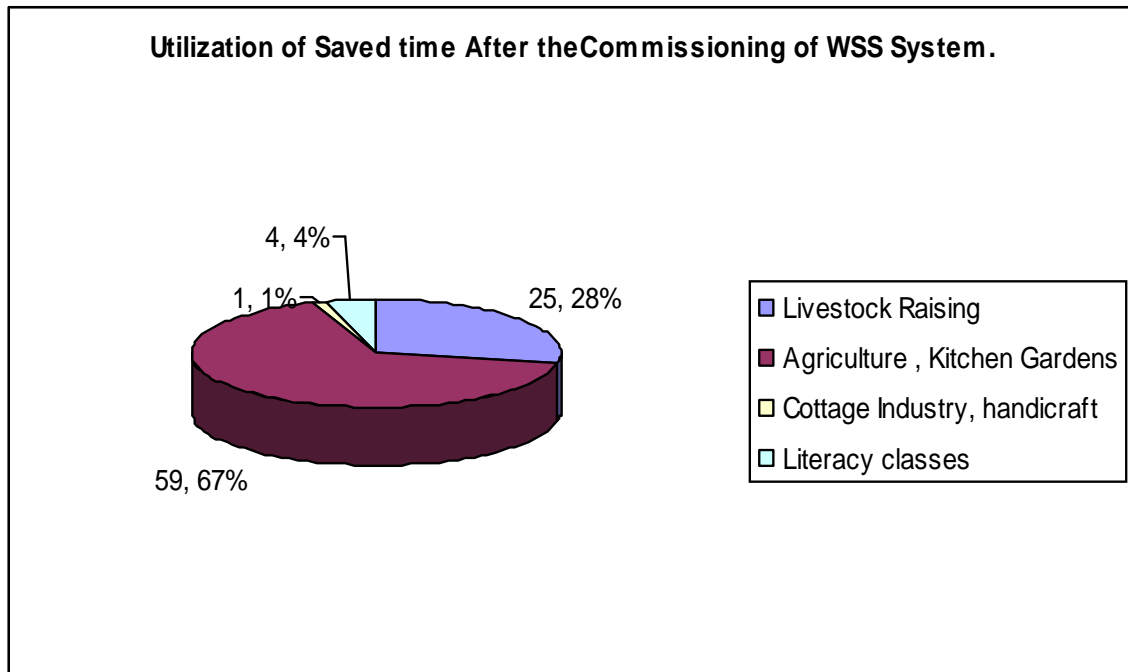
Women's role now has changed significantly than in the past. Because most women mass is illiterate and the social structure as well as a household is more male-dominated it is quite a challenging task to develop a feeling of leadership in women. However, given an equal opportunity, women can contribute a lot for betterment of society. With involvement of women, promising results have come in income generation activities; living standards, health, hygiene, sanitation, and most importantly better community feeling. The meaningful and responsible attitude of women toward building a strong and dynamic community will definitely pave a path for sustainable development in WSS system. After commissioning of the water supply system in Kahun village majority of the women have utilized their surplus time in some form of income generation activities, which is shown in table 13. From the table, it seems that majority of women are involved in agricultural activities because it is less difficult and indigenous skills can be utilized for that.

**Table 13**

**Utilization of Saved Time After the Commissioning of WSS System**

<b>Form of Income Generation Activities</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Livestock Raising	25	27.7
Agriculture , Kitchen Gardens	59	65.5
Cottage Industry, Handicraft	1	1.1
Literacy classes	4	5.5
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*



**Figure: 11**

A woman whose time in fetching water all through morning has now been reduced to a short walking distance as well as a safer water quality than before. Before the commissioning of the new water supply system the women used to fetch water from Kuwas and Dhungedhara. Beside the increase in these income generation activities, majorities of the women are able to attend adult classes. Now very few women are literate. Due to nearer water source, most of the women could apportion their time to literacy classes conducted by various

institutions. So now they are literate now. One of the women says that she had a great dream of being educated but never hoped she could learn and write. She used to say *Chhori buhari kophootte ko marma huncha jasto lagthyo*, but now her dream has come true. *Karma* in Nepali means 'luck', which is destined by previous life (*Janma*). If one has done good things in previous life then only he or she can have a better life in this *Janm*. Now women can apportion more to productive and reproductive activities. Now most of the women can apportion their time in agriculture, many women have carried out plantation of fodder trees and have planted seeds of varieties of vegetables and flowers, too.

Since the water supply and sanitation program falls as sub-sector in the social sector, making a direct calculation of timesaving and income generation is a quite hectic and vague task. However, an attempt has been made to estimate the amount of time that is saved and the corresponding monetary value that is attached as an opportunity cost. Before the commissioning of a WSS system, in average a household has to spend about an hour per day to fetch water. After the WSS system installed, the average time spent is about 20 minute per day. So, if a household saves 40 minutes per day it can be utilized for any activity that can generate them an income. So in a month a household saves 20 hours which is in other words, 240 hours or 30 man-days (based on 8 hours average work-day) of working time gained per year. The minimum average local wage for an unskilled laborer is Rs. 60. Hence, it is seen that a household can gain as much as Rs. 1800.00 per year. Besides, indirect profits gained from better health and hygiene is far more rewarding, which can't be calculated here because of the time limit for this study.

## **A CASE STUDY**

*Sita Lamichhne is 36 years old woman. Her permanent address is Kanhu VDC, Of Kaski District. She has passed class 10 from Rastriya higher Secondary School in 2043. From the childhood, she was interested in social activities and social services. She was involved in child culb, when she was young. At the same time she got married with Tika Ram Lamichhne. Then she left her teaching in difficult condition of her house.*

*She got trained from the district education office to teach in non formal education programme. Then she started teaching adult literacy class. This programme is also was very good for uneducated women in the village. They are very interested to read. She has earned 6 hundred rupees as salary per month the course duration is only six months.*

*After six months she got trained from National Bio-gas Company as motivator for her village. She has motivated each house to installed Bio- gas plant with toilet. As motivator she has installed 175 number of bio-gas plant in different households by showing the advantages and disadvantages of Bio gas plant as a social work.*

*Now she is living in nuclear family. She has two daughters, one son and her husband. The two daughters read in bachelor and son in PCL, in Prithvi Narayan Campus, Pokhara. She is still struggling to go ahead for daughter's and son's education.*

*Later, she was involved in the WUC as a member 2061-2063B.S. Then she worked as a motivator in the village she is working at giving awareness of*

health and sanitation education to women who suffering from sanitation. And mainly she awares to specific attendance for women participation in DWSSP.

According to **Sita Lamichhne** three factors are essential for women's participation in development process. **State clearly must be declares about participation of women in many different sector.** Our society is patriarchal instructed by Hindu religion and patriarchy. **Our patriarchy society can't accept women participation in every stage.** They want women to be involvee in household chores work and reproductive works as care giver. **Women are more uneducated** than the males.

She is always involved in every community development work. She says that "after the commissioning of new DSSSP approximately 4 hours time is showed in a day. That time is used to income generating activities like kitchen garden, and livestock rising. She earns nearly 50 thousand rupees only from tomato and banana. By selling cow milk in Foolbari bazaar she earns 5000 rupees monthly. She has spent all this income in her daughter's and son's education and also she wants in future, her daughter and son can give great contribution to the nation as a good service provider.

Before the commencement of the new DWSSP, she was busy in carrying water from Kamerepanin Kuwa. At that time she had problem of injury of back bone. After that she has get rid of this problem and she becomes happy and offers great blessing to all staff of NRCS, Kaski. The case study clearly shows that women's participation plays vital role in development role.

### **7.3. Changes Towards Sanitation and Community Cleanliness**

The objective of drinking water supply system is not only to provide of safe drinking water to the community to provide facilities in different aspects of sanitation, e.g. household latrines, washing platform, individual, household and environmental sanitation, change in attitude and practice, and community cleanliness, etc. As proper sanitation without water is impossible, water must be utilized for achieving the desired and affordable sanitation practice in the community. In this context, various positive impacts and changes observed in health and sanitation- related activities are briefly discussed here.

#### **7.4. Hand Washing and Sanitary Habits**

One of the problems with sanitation is that it is rarely a strong felt need, especially in rural areas. Only a few people realize that many disease are caused by poor sanitation or understanding the way these disease are caused by poor sanitation of understand the way these diseases are transmitted. Water facility alone does not solve people's problems in matter of hygiene unless hygiene components are included. Many local specific risks of transmission of a water and sanitation related diseases, based on behavior that continues after the introduction of improved facilities, make health education support programme necessary. The training of hygiene education is especially sought to women motivators. Participation of women in sanitation projects is of crucial importance. A change experience in hand washing and sanitary habits are shown in table 14.

**Table 14**  
**Changes Experienced in Hand Washing and Sanitation Habits**

<b>Washing means</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Ash	10	11.1
Soap	80	88.8
Mud	0	0
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

### **Figure: 12**

Usually women are motivated to have sanitation facilities for reasons of convenience and privacy. They are the ones who keep the surrounding and the infrastructure clean, who maintain them and who train their children to use them. Women themselves have been found to be the most effective promoters and educators in programmes where they are primary focus.

The women motivators of Kahun village are teachers who are trained by the NRCS office. They successfully impart their knowledge about sanitary

habits to the villagers. In this area diarrhea and worm infection is very high. This makes the people weak and caused dehydration due to loss of body water. This is mainly because of drinking contaminated water. Children are prone to get infected when their hands are not washed properly after defecation and those dirty hands contaminate kitchen utensils and food. Before the water supply system, majority of the people did not know that mud was also source of bacteria. Before the program is launch, most of the people wash their hands by mud or water only. Hand washing, promoting the use of ash as a substitute for soap is one of the first programmes. According to the local shopkeeper, the use of soap is increased from about 35 to 40 %. Majority of the women now admit that the knowledge of hygiene behavior has changed a lot due to their changed sanitation behaviors. In above table 11.1 % women use ash out of total and 88.8 % women use soap daily. In this way this table clearly shows that hand washing and sanitary habits are changed after the commissioning of the new DWSSP.

## **7.5 Changes in Defecation Habits**

In this area there were no latrines before the commissioning of water supply and sanitation project. There were few latrines approximately 10 to 12 out of 250 households. Among them all latrine were constructed in Brahmin and Chhetri caste and some other latrines were in the form of pit latrine. Defecation areas were found some distance away from where people lived. Flies and insects have their share to transmit these diseases. A change in defecation habit is shown in table 15

**Table 15**



### Change in Defecation Habits

Changes	No. of the Respondents	Percentage
Yes	83	92.2
No	7	7.7
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

### Figure: 13

In order to make people aware of hygiene and to change the sanitary habits, the users committee of Kahun village provides free non-local materials (cement, rod, pipe, tins, bricks, water-seal pan) by the system of Sanitation Revolving Loan Fund (SRLF). There are some pit latrines in that area. Though the pit latrines are constructed, the behaviors of defecating do not change totally. Sanitation is, to a large extent, a social phenomenon, rather than technical one. The background of cultural, social and environmental factors influence in sanitation behavior in society. Still a majority of interviewees admit that men and women use these toilets. Children are the ones who still

defecate in the open, areas because some of them feel uncomfortable defecating in the closed area as they are not used to it.

Most women eagerly admit the benefits of new water supply and sanitation programmes in disseminating knowledge on health and hygiene, which has helped to reduced the incidence of diarrhea disease among children. The habits of defecating on stream banks by people, especially adults changed to the use of pit latrines. The knowledge about recycling used water for kitchen gardening and improving cultivation is practiced. Hygiene and sanitation behavior is changing quickly to the extent possible time. However, more than 50% of the people still expect some form of subsidy as introduced by NRCS for latrine building. Now the children wear clean clothes.

Regarding personal cleanliness, most men and women now wash themselves at the taps. There is enough water and water nearby them. However, the daughters- in- laws feel shy to wash themselves by a tap that is in front of her father in law. Changed experience in sanitation habits are shown in table 16.

**Table 16**  
**Changed Experience in Sanitation Habits**

<b>Changes</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Clean than before	67	74.4
Satisfactory	23	25.5
No difference at all	0	0
Poor	0	0
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

#### **Figure: 14**

67 (74.4 %) women say that the sanitation habits are clear than before after the commissioning of new DWSS system and 23 (25.5 %) women say that the sanitation habits are satisfactory. The project has changed the habits of washing clothes; washing is more frequent, because water is closer. All women go to the taps to wash their clothes because the water is clean and enough. Now the children go to school with clean dresses because of availability of water in every time in every tap-stand in every cluster.

#### **7.6 Changes in Bathing Habits**

After the accessibility of water near by and also by the health and sanitation education, people do not suffer from among diseases because of personal hygiene such as bathing. So, the people are now more conscious about their health and take a bath regularly. Here, the researcher shows the change in bathing habits in the table 17.

**Table 17**  
**Change in Bathing Habits**

<b>Changes</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Highly	80	88.8
Considerably	10	11.1
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

**Figure: 15**

In above table 80 (88.8 %) women change bathing habits in that area and 10 (11.1%) woman considerable change in bathing habits. The data shows that the bathing habits of that area have been changed. Because of this the children are healthier and have cleaner heads than before. Now with the sanitation knowledge attitude and behavioral change through the women motivators the children don't have such problems. Before the commissioning of the DWSP system, there were no water taps and women family members took their children to traditional system of water such as kuwa or dhungedhara. Cattle and cows also used kuwa water. There was much more possibility of contamination due to human defecation and cattle movement. The women had to

wait in a line and thus could not wash their children or themselves properly because of time factor. Moreover, the water was not clean and caused many skin problems. But now as there are several water taps nearby the houses and of the advice of the women motivators trained through the NRCS office of water supply, the bathing habits have changed, now they wash themselves and their children properly, which has eventually benefited their health a lot.

### **7.7. Changes in Sanitation and Community Cleanliness**

The table demonstrates that positive impact is observed in overall health hygiene and sanitation of the household and community. Concerning water supply and sanitation, the village has undergone a great change since the project and women's involvement programme was initiated. Similarly, changes occurred in sanitation practices are shown in table 18.

**Table 18**

**Change Occurred in Sanitation and Community Cleanliness**

<b>Change in bathing habits</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Very positive	60	66.6
Positive	30	33.3
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

### **Figure: 16**

Sanitation behavior had been greatly handicapped in the past due to the scarcity of water. With the help of community technician and local women's involvement in the village, the water supply is now well- maintained and personal hygiene is improving. Community has become much leaner because of the programme. The women wash their dishes regularly than and has given up eating 2 or 3 days old leftover food kept uncovered. They also know about immunization, how and when to prepare 'Jeevanjal', how to clean infected eyes and how to wash hands with ash before eating and after defecation, to use pits for rubbish and how to clean the gagro with ash and so on.

Before the sanitation and women involvement program 80 % washed their hands with mud (a big source of bacteria). Hand washing, promoting the use of ash as a substitute for soap, was one of the first programme. Only 5 % reported washing with mud and 82 % with ash. According to the local shopkeeper the use of soap has increased from about 9 to 17 %.

## 7.8 Protection of Water from Contamination

The fetched water is used for various purposes. It is stored for drinking and cooking, and for washing vegetables and dishes. It is stored also for animals. It is also used for washing hands, especially after defecation. The water is unsafe if the buckets are not covered after filling. Majority of the women in the village feel that boiling water is too expensive and is not affordable. Most of the women cover the water with containers. Now they know that uncovered water is highly contaminated through physical pollution. The way in which water is protected from contamination is shown in table 19.

**Table 19**  
**Protection of Water from Contamination**

<b>Protection strategy</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Boil	30	33.3
Cover the water with container	60	66.6
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

### **Figure: 17**

Most of the women say that User's committee puts potash/ chlorine in the tanks, the source of drinking water. The containers are washed when they are empty. For washing most women use ash. Soap is also occasionally.

### **7.9. Overall Effect on Health and Hygiene**

In the health sector there are notable changes. Previously they used to depend on Dhami and Jhankris (traditional healers). Even though they are awarded about healthy habits through DWSS programme they are less frequently visit the health post. But, now they prefer to go to health centers. There is sub-health post in Kahun VDC. Now the villagers are not bothered by many of the health problems.

People suffer from diseases not only because of contaminated water but also because of the long distance to fetch water. As a result they suffer from



back pain, body aching and headache. These problems have been reduced now because of the nearer water collection points. The impacts on health are also obtained from the information provided by Kahun sub-health post, which shows a marked decrease in overall health problem. The respondents visiting health post before and after the commencement of the new DWSSP system is show below in table 20.

**Table 20**  
**Respondents Visiting Health Post**  
**Before and After Commissioning the New DWSSP System**

<b>Year</b>	<b>Bai</b>	<b>Jes</b>	<b>Ash</b>	<b>Shr</b>	<b>Bha</b>	<b>Asw</b>	<b>Kar</b>	<b>Man</b>	<b>Pou</b>	<b>Mag</b>	<b>Fal</b>	<b>Cha</b>
<b>2062</b>	<b>125</b>	<b>158</b>	<b>81</b>	<b>264</b>	<b>264</b>	<b>177</b>	<b>111</b>	<b>110</b>	<b>121</b>	<b>352</b>	<b>181</b>	<b>113</b>
<b>2064</b>	<b>61</b>	<b>49</b>	<b>55</b>	<b>78</b>	<b>206</b>	<b>77</b>	<b>105</b>	<b>21</b>	<b>76</b>	<b>68</b>	<b>119</b>	<b>132</b>

*Source: Field study, Feb, 2009*

In above table shows that gastro-enteritis, diarrhea, dysentery, worm, typhoid, fever, jaundice (Infective hepatitis), vomiting, abdominal pain, and cholera have tremendously reduced immediately after the commissioning of the new water supply and sanitation programme.

### **7.10. Change in the Way of Thinking**

Before the commissioning of new water supply system the women thought that diarrhea occurred due to heavy food. They never believed it to be because of bad water. Like wise vomiting, dizziness, irritation, and if there was no appetite are caused because of disrespect to their rituals. Polluted water (the water taps are touched by meanest women of from the dead person's house or so called lower cast people or someone's evil eye right) is the main cause of

these diseases. But now due to the knowledge imparted by health motivators, they know that these things mainly happen because of bad water. Thus now they protect water from contamination. The village maintenance workers repair the water taps, the women motivators impart hygiene knowledge to the village women and the tap stand caretaker cleans the nearby areas, and motivate others to handle the taps correctly. Thus the users committee chooses these people.

### **7.11 Ownership Feeling**

Previous experiences have demonstrated that drinking water launched without people's participation have failed in comparison to those projects launched with community participation (Giri, 19991).

In the completion of this project the people of this village have been involved from the very initial stages, from the pre-construction phases to the post construction period. Women village motivators have accompanied the project and through them the local women have gained health education. Likewise village maintenance worker, women tap stand caretaker, VDC chairman, vice chairman, chairman of

Nepal Red Cross Society Kahun sub-branch and local women groups have contributed in one or the other forms for the creation of this project. They have provided financial support, free labor, village cleaning activities, etc. Thus now they have a great responsibility as well as feeling of ownership to the new water supply and sanitation project. They are ready to face any problems related to minor and major breakdowns of the water taps. The village maintenance workers who are trained by NRCS District office are ready to provide financial support and pay taxes for the improvement of water. Moreover, they are careful in handling the water taps. Due to the water supply and sanitation project now the women have known the importance of group. Group formation has been the basic concept of WSSP. Community development feeling on women has been found highly

increased. The male members have realized that water and sanitation also belong to women's department so the involvement of women in water and sanitation sector is of crucial importance. The women motivators who impart the hygiene education to the local women are seen to be very effective. The women tap stand caretaker maintains the areas near the taps. Previously women are not involved in DWSSP, as such most of the DWSS project failed. But, now women are involved in WSS in different forms such as users committee members, volunteers, tap stand caretakers etc. This attribute to a better development of gender feeling and this is realized by males, too.

### 7.12 Community Feeling

Now the people have realized that community participation plays a key role for the development of their village. The best three definitions of community development in advanced sociological literature discovered basic consensus on only three definitional elements; social interaction between people, one or more shared ties, and an area context (Almger, 1992) through community participation change occurred in diseases. Opinions the respondents regarding changes occurred in incidence of water- borne diseases are shown in table 21.

**Table 21**  
**Change in Incidence of Waterborne Diseases**

<b>Change in waterborne diseases</b>	<b>Number</b>	<b>Percentage</b>
Decreasing rapidly	67	74.4
Decreasing	23	25.5
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

### **Figure: 18**

The trend of water borne disease has decreased after the commission of the new WSS system. Water related diseases were very common in this area before the new water supply system. The records obtained from Kahun sub health post verify this saying. It shows a change after the month of Mangsir Nepal Red Cross Society had completed construction of DWSS system in the project area on 2063 Baisakh. So that cumulative members of health post visitors had gone decreasing. This however can also be attributed to the positive impact of water supply and sanitation training's to the villagers by women motivators.

### **7.13. Impact of Women's Involvement in WSSP**

Most of the women feel that it is very useful to involve women in the water supply and sanitation project from the initial stage pre-construction to the post construction. The local women can communicate more easily to the women of water committee, because water related activities are mostly the

concern of women. In the villages women are shy to talk freely, directly to the engineers about defecating habits for the construction of latrines. The local village uneducated women, feel unrestricted to give their opinions and discuss the best possible sanitation option for local circumstances to the women. Usefulness of the women's involvement in WSS is shown in table 22.

**Table 22**

**Usefulness of the Women's Involvement in DWSSP**

<b>Usefulness</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Very useful	56	62.22
Useful	34	37.77
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

**Figure: 19**

According to local women, women workers generally understand more intuitively the problems and issues faced by other women and can communicate more openly with other women. The women sanitation promoter observe that only a woman can tell another village woman how to keep her

house, her street and her children clean, as well as to take care of the food they eat.

#### **7.14 Involvement of Women in Decision – Making**

Involvement of women in decision – making is shown in table 23. Majority of the women admit that their decision – making activities have increased. Normally in the village, it is men whose decision is heard, but it is women whose decision has been heard for a new water supply project in this area. Now the women look more confident in decision – making activities than before.

**Table 23**

**Involvement of Women in Decision – Making Activities**

<b>Degree of involvement</b>	<b>No. of the Respondents</b>	<b>Percentage</b>
Higher	53	58.8
Adequate	37	41.1
<b>Total</b>	<b>90</b>	<b>100</b>

*Source: Field study, Feb, 2009*

**Figure: 20**

The district office has consulted women on the design of location along with user committee members; they give the villagers the idea of making ventilation improve latrines. The materials were not found in the community so that NRCS office provides non local materials easily from the market. The latrine is suitable for the community where the community has easy access of sufficient water. They contributed to decision making for community water supply and sanitation by providing information on schedules for using facilities that fitted women's work pattern. Likewise they provide information on schedules for using facilities.

## CHAPTER EIGHT

### SUMMARY, CONCLUSION, AND RECOMMENDATION

#### 8.1 Summary

Nepal is a country bounded by the great Himalayan and rich fresh water resources. But resources are hardly used for human needs. Water is a truly unique commodity, without it life does not exist. Life can however, become equally uncertain even when there is water all around. While excess water in the form of floods and water deficit in the form of droughts have struck Nepal time and again. Consumption of unsafe water has claimed thousands of life annually. Poor knowledge about the relationship of the contaminated water and disease and the "Safe" handling of water and other sanitation practices cause 80% of the diseases leading to illness and death among Nepalese infants. Besides, majority of the rural population in Nepal lives under very difficult living conditions with a little facility to provide clean drinking water and sanitation. Only one person out of every four people in Nepal has access to potable water. Thus, lack of adequate water for domestic purposes and lack of awareness of the importance of sanitation behavior have resulted in poor health conditions. One of the basic objectives of water supply improvement in rural Nepal is to improve the people's health.

Women involvement in the programme has been conceived from the perspective of inter – linking water, sanitation and health with quality of life. As all chores related to water are basically within the responsibility of women, their involvement is perceived to enhance sustainability to the programme. Thus, the present study aims to analyze the women's perception and their activities in the programs.



The objectives of the study are to find out the socio- economic and demographic characteristics of women, to identify the role of women in water supply and sanitation programme and to study the impact of water supply and sanitation programme on women's life.

The research design of this study is of descriptive nature. The descriptive design which describe the characteristics of socio- economic and demographic characteristic of the women's level of participation and role played by women in the programme of the study area. In this study both qualitative and quantitative data have been used, and the source of data is both primary and secondary. Out of 250 households, 125 are included as sample of the study. The primary data were collected through interview schedule and interview with key informants.

In this study area, among the sample (90) the Brahmin are reside 61.1 %, similarly Chhetri 22.2 %, whereas the lower cast group people such as Damai, Kami and Sarki are 7.8 %, , Thakuri 5.5 % Magar 2.2 % and Shrestha 1.1 %. So the area is highly dominated by the high caste group people. While viewing to the respondents age group, people from the range 31- 40 are found the largest, which represents 34.4 also the range 41 - 50 consist 26.6 %. Nepal is basically agrarian country and in the study area 85.75 % of people are involved in this sector. In academic field there is low level of illiteracy i.e. 13.3 % has completed S.L.C. 16.6 % SLC send up and 61.1 % are literate only. (During the study time while asking the respondent, fctors to demanding the programme 57.7 % to save loss of time and 23.3 % said to reduce water carrying burden). The programme mainly focuses on women involvement because women are the stakeholders of the programme out of 75.5 % of the total responds regarding the usefulness involvement of women in WUC. During the programme period involvement of women as a village health promoters can be found as not effective 91.1 %. This shows that they were not involved as village health promoter. Only 8.8 women were involved as village health promoter. Out of

the 90 respondents said that they were utilize their save time in the respective field and among them the highest no of respondents use their time in the field of agriculture which constitute 90 % similarly 4.4 % spent their saved time for the literacy classes.

Similarly, changes occur in hand washing and sanitary habits and 88.8 say they use soap whereas 7.7 % say they use ash. Similarly 92.2 % of the respondents say that changes occur in defecation habits. 74.4 % of the respondents say that they live cleaner than before 88.8 % has taken a bath regularly.

After launching the programme the people come to know about the various diseases, which originate from dirty water. So they are very aware to use such water. Thus, 33.3 % of the respondents drink boiling water and 66.6 % of the respondents drink water is kept in the container with cover. Similarly, 74.4 % respondents out of total say that water borne diseases are reduced rapidly than the past and 25.5 % respondents said that the disease was decreasing. Among the respondents 75.5 % say that this programme is very useful 58.5 % women are involved higher degree of decision making process during the programme.

## **8.2 Conclusion of the Study**

The programme in Kahun village has changed the general status of women through training, exposure, provision of knowledge and skills, and by enabling them to participate in the formal process of development through physical involvement in water supply and sanitation. The women motivators, volunteers and women user committee member's responsibility to make fellow women and men aware of sanitation issues show that women can do something, more than just farming and household activities. The women of Kahun village

are becoming increasingly familiar with the formal system and are preparing themselves to participate in water system, decision-making and planning process by making them involve in such activities.

Lacking access to knowledge of sanitation behaviour, awareness of the health implication of improperly handled water and poor sanitary habits have increased among most women and men. Due to familiarity with facial oral transmission of disease, more people are building and using latrines and pursuing others to do the same. A growing number of people now feel that villagers should have latrines, and should be aware of the pointlessness of their own efforts to use latrines if others continue defecating in the open. The positive result of the new water supply system in the area with community participation and women involvement has created a realization that the sustainability of the project largely depends on people's participation with women's involvement. The training provided by the NRCS has made the women realize their self-respect and confidence. Before the project there were no such attempts which voiced women's need regarding water management and in other fields. A user's committee consists of only female and other 10 male members. They play important role to raise fund for maintaince work. It is understood that women have been playing an important part in the formulation, maintenance and operation of the policies. The women have also participated voluntarily in transportation of local materials. Thus this reflects gender involvement in community participation.

According to the implementing agency, the engineers and overseers have actively tried to change women's reality of self- esteem by adopting innovation approach and focus group discussion to make realize that women have an important contribution to make. According to the local women water users, the community and their children seem much healthier. Especially, diarrhea, skin disease, worms and infection of eyes among infants have been tremendously reduced. There is a great change in group-formation. A large

number of women actively take part in the village meetings. When the district engineer visits the village for supervision of the water supply system, the women actively put forward their ideas and suggestions as well as their problems.

Women motivators play a key role in building awareness and motivating people, and give the ideas about sanitary habits, and building of VIP latrine. Likewise, they make the work of the engineers easy by assisting project officials in conducting survey on knowledge, awareness and evaluation structures, and by organizing the orientation camps in the health and sanitation and education fields. The training provided by the implementing agency to the village maintenance workers in matter of water system, of the particular village, has created a positive impact in the community self-help project. This has led to the villagers realize the importance of their own village.

Some trainings and exposure visits provided by the agency enhance the women's confidence and management capacity. However, further training and exposure visits are most essential for women's capacity building and management of WSS.

#### **8.4 Recommendations of the Study**

**The researcher has made the following recommendations.**

1. Looking at the pattern of water users committee there are only three females involved, and the remaining ten members are male. Though the programme focuses on women's involvement at every stage, the participation of women in this group is very low. The user group is formed in the project area to distribute and manage the drinking water launched through the NRCS. It will be necessary to ensure that women's voices are heard and given due attention. Women are the main users of

household water. It is important that both men and women should be informed about scheme implementation options, as well as their impact on the money and time budget of the household, community, operation and maintenance. In the research areas, most villagers, male and female want many more women in various tasks and office including the VHP and WUC. Though village health promoter and tap stand caretaker are females and male from the village, they are now accepted as natural part of a village life.

2. Women are found to be overloaded by the household works. Their involvement in the programme is not possible unless they are supported by the male members of the family. Male members are guided by the traditional concept of man-women role. Male members do not want to change their roles unless they are presented with benefits, to the family, by assisting male- female each other. Therefore the males should be provided with orientation showing advantages of sharing household work. This could be started with gender sensitization training to the members of Kahun village.
3. The other aspect of capacity building is to give responsibility in the WUC. Women are the prime users of water and they should also be involved in the decision-making positions such as chairperson, secretary and members.
4. As it is observed that women representation in the most of the committee is very limited or token presentation only. Therefore, there should be a clear and specific policy regarding women involvement in water supply management system.
5. The participation of women should be significant and active during the planning and implementation of drinking water project. The women

should also be encouraged to participate in management of the project along with health education. For this they should be trained in the areas of planning, implementation and management to make able to manage the project by themselves in a sustainable way.

6. User committee is responsible for simple repair and maintenance of drinking water project. But the beneficiaries are not found much aware of management activities of user committee, although most of the women know who the members of the user's committee. Hence, there should be transparency as well as simplicity in project functioning and management activities.

## BIBLIOGRAPHY

- Allen and S.N MU **Women in India and Nepal.**
- Acharya. M. (1997), **Gender Equality and Empowerment of Women: A** status report submitted to UNFPA, Kathmandu Nepal.
- ADB, 1997: **Project Programme Audit Report on the Rural Water Supply Sector Project in Nepal.**
- ADB and UNDP, 1989: **Women and Water Proceeding of Regional Seminar, Manila.**
- Bolt Eveline, 1989: **Sanitation and Women's Involvement in Water Supply, UNICEF Study.**
- CWSS, 1987: **Women Involvements in Community Water Supply and Sanitation.**
- CAROLINE. O.N. Moser world development Volume: 17.
- Lleick, Peter H.ed.1993 **Water in crisis: A Guide to the World's Freshwater Resources.** New York,
- NG/MHPP and WHO/ UNDP **Nepal: Drinking Water Supply and Sanitation Sector Review and Plan (1991-97).** Kathmandu: January, 1991
- NG/MHPP, 1994: **Nepal National Sanitation Policy and Guidelines for Planning and Implementation of Sanitation Programme.**
- NG, NPC 1994: **Nepal National Sanitation Policy and Guicelines for Planning and Implementation of Sanitation Programme.**
- NG/MHPP/DWSS, 1991: **User's Group Participation in Drinking Water Project: Performance, Problems and Potential.**
- NG, NPC, CBS (1997), **Nepal Living Standards SURVEY Report, 1996** (two vols) Central Bureau Statistics, Thapathali, Kathmandu, Nepal.
- NG And ADB, 1996,: **Fourth Rural Water Supply and Sanitation Project Memorandum of Undrstranding of Appraisal Mission.**
- NG/ WECS, 1995: **Gender Issue Related to Water Resources and Energy Development in Mid Western Dve. Region on Nepal.**

NG / WECS; 1996: **Final Report on Study on Gender Issues Related to the Water and Energy Sectors in the FWDR of Nepal.**

Lorenzen, E. (1996), **Drinking Water, Sanitation and Health Education in Rural Nepal: Water for Health**, Kathmandu, Nepla.

Luitter. S. (1992). **Women in Development**, Kathmandu, Nepal.

MPO. 1991: **The community Water Supply and Sanitaion** (1992-96).

UNO Report: **(Two Halves Make a Whole CCIC 1991 page 12).**

UNICEF, SOUTH ASIA, 1993: **Report of a Regional Meeting on Environmental Sanitation**, Kathmandu.

WHO and UNICEF, 1993: **Water Supply and Sanitation Sector Monitoring Report U.N New York.**

**Ninth five year plan** (9th plan 2002)

NRCS (2002) **Community Development Program: Policy and Procedure (in Nepal Red Cross Society, Kaski.**

Nepal Red Cross Society (1998-2002/03): **Drinking Water and Sanitaion Programme, Plan of Operation (The Sixth Phase).**

NEW ERA, 1991: **Evaluation Report on Women Involvement and Sanitation Cimponent in CWSS.**

IRC, 1994: **Together for Water and Sanitation**, Hague, Netherlands.

WHO and UNICEF, 1993: **Water Supply and Sanitation Sector Monitoring Report U.N. New York.**

Women of Nepal; **A Country Profile (1996).** United Nation, New York.

## **Appendix: 1**



Primary Survey of Women's Participation in Drinking Water Supply and Sanitation  
Programme, A Case Study of Kahun Village Development Committee.

## Questionnaire Schedule

### **FORM-A: Question for Women Users**

#### **Personal History**

1. What type of water source have you been using?
  - a. Traditional source
  - b. Government or NGO's/ INGO's water supply system.
  - c. All of above.
2. Who fetches water frequently in your family?
  - a. Myself
  - b. My husband
  - c. My daughter
  - d. Others.
3. How long does it take you to fetch drinking water after launching the water supply system?
  - a. Less than 10 minutes
  - b. More than 10 minutes.
4. How long did it take you to fetch water before launching the DWSS system?
  - a. Less than 10 minutes
  - b. More than 10 minutes.
5. How is the surplus time utilized after the new DWSS system?
  - a. Income – generating activities

- i) Agriculture/Kitchen garden
    - ii) Cattle/Livestock farming
    - iii) Cottage industries/Handicraft
  - b. Career building
    - i) Student
    - ii) Teacher
    - iii) Service
    - iv) Literacy classes
- 6. What are the changes experienced in household sanitation habits after DWSS facility?
  - a. Clear than before
  - b. Satisfactory
  - c. No difference at all
  - d. Poor.
- 7. How frequent do you visit the health post visit after launching the DWSS system?
  - a. Frequent
  - b. More frequent
  - c. Less frequent
  - d. Poor.
- 8. Are you happy in all respects with the launching of the New DWSS system?
  - a. More happy
  - b. Satisfied
  - c. Indifferent
  - d. Unhappy.
- 9. What is the degree of your involvement in decisions making of the operation and maintenance activities of the DWSS system?

- a. Higher
  - b. Less
  - c. Adequate
  - d. Negligible.
10. Who plays the major role in decision-making activities in your house?
- a. Male member
  - b. Female member.
11. Why did you want a DWSS system in your house?
- a. To save of time
  - b. To get rid of disease
  - c. To Lessen morbidity
  - d. To reduce incidence of back-pain.
12. Are you involved in WUC?
- a. Yes
  - b. No.
13. What is the tendency of water born diseases after the commencement of the DWSS System?
- a. Decreasing rapidly
  - b. Decreasing.
14. How has bathing habits changed?
- a. High
  - b. Considerably.
15. Has any impact been observed in overall health, hygiene and sanitation of household and community after launching the DWSS system?
- a. Too positive
  - b. Positive
  - c. Negative.

16. Are you village health promoter?
  - a. Yes
  - b. No.
17. Are you involved as a village maintenance worker?
  - a. Yes
  - b. No.
18. Mention about the following practices:
  - a. Means of hand-washing now:
    - i) Mud
    - ii) Ash
    - iii) Soap.
  - b. Change in defecation habits:
    - i) Yes
    - ii) No.
19. Your view regarding usefulness of women's involvement in WSS:
  - a. very useful
  - b. Useful

## **Form- B: Questions for DWSS User's Community Members**

### Personal History

Sex:

1. How do you feel working together with women users in DWSS system?
  - a. Very useful
  - b. Useful
  - c. Less useful
  - d. Detrimental.
2. How do women influence over user's committee activities in DWSS System?
  - a. Very actively
  - b. Actively
  - c. Less actively
  - d. Indifferent.
3. Do you think that women should be involved in overall operational,managerial and policy aspects of a DWSS system ?
  - a. Yes, too effective
  - b. Effective
  - c. Indifferent
  - d. Ineffective.
4. Has any significant change occurred in income generation activities after launching of the DWSS system?
  - a. Yes, very much
  - b. Significant
  - c. Little
  - d. Indifferent.

## **Form-C: Questions for Implementing Agency**

### Personal History

1. How do you see importance of women in DWSSP system?
  1. How do you see the importance of women in DWSSP system?
    - a. Importance
    - b. Less important
    - c. Indifferent
    - d. Negative
  2. Can women bring positive impact on socio-economic status of a community?
    - a. Yes, too positive
    - b. Positive
    - c. Indifferent
  3. How do you assess the impact of the existing DWSS situation on the work burden and health risks of women, and children?
    - a. Positive results
    - b. Optimistic
    - c. Indifferent
    - d. Dangerous
  4. Does your office maintain qualitative and quantitative information on the status of women and gender issues for project planning?
    - a. Maintain and update systematically
    - b. Maintain on ad-hoc basis
    - c. No system at all.
5. What do you think the women need for producing better results in community life?
  - a. Education
  - b. Training

- c. Both education and training
- d. Awareness

**Question for Health Post Personnel.**

1. After the launching of the DWSS system, have you noticed any change in number of patient/children visiting the health-post related with water- born disease, e.g. diarrhea, cholera gastro-enteritis, etc.?

- a. Less than before
- b. No change



### **Key Informant's Survey**

1. Who repairs the technical problems of the drinking water structure maintenance? (RVT), Tap-stand, Catchment, Intake, Joint of pipeline).
2. Who conduct health education classes in the community?
3. Do you feel that the environment of our society is good?
4. How do you use the decreasing time of the work-load in other field, are you able to earn something in that remaining time?
5. How do you assess the impact of the existing DWSS situation on the work burden and health risks of women, and health risks of women and children?
6. After the launching of the DWSS system, have you noticed any change in number of parent/children visiting the health –post related with water born disease? e.g. diarrhea, cholera gastro-enteritis etc.
7. What are the causes of implementing of DWSSP in Kahun VDC?
8. What is your role on implementing DWSSP in your VDC?

**Following persons are involved in key informant checklist.**

<b><u>Name</u></b>	<b><u>Designation</u></b>
<b>1. Hari Prasad Baral</b>	<b>Chairman NRCS</b>
<b>2. Netra Prasad Timilsena</b>	<b>Overseer NRCS</b>
<b>3. Khem Raj Sapkota</b>	<b>Programme co-ordinator</b>
<b>DWSSP</b>	
<b>4. Chitra Prasad Limichhne</b>	<b>Chairperson VDC Kahun</b>

- |                                |                                 |
|--------------------------------|---------------------------------|
| <b>5. Dhan Prasad Gurung</b>   | <b>Chairperson WUC</b>          |
| <b>6. Ishory Prasad Achary</b> | <b>Chairperson sub-branch</b>   |
| <b>7. Ishory Sharma</b>        | <b>ANM Sub-health post</b>      |
| <b>8. Babi Gurung</b>          | <b>Health worker Sub-health</b> |
| <b>post</b>                    |                                 |