

A Study of Community Based Rural Water Supply  
and Sanitation Project; Impact Study in  
Dhaneshwar Scheme of Kabhre District

A project work report submitted in partial  
fulfillment of the requirements for the degree of  
Master of Arts in Rural Development

Submitted To:  
Central Department of Rural Development  
Faculty of Humanities and Social Sciences  
Tribhuvan University, Kirtipur  
Kathmandu, Nepal  
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by  
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## Recommendation Letter

This is to certify that Mr. Laxmi Prasad Upadhayay has prepared this project work report entitled "A Study of Community Based Rural Water Supply and Sanitation Project; Impact Study in Dhaneshwor Scheme of Kabhre District ". under my guidance and supervision. I therefore, recommend this report for evaluation.

---

Umesh Prasad Acharya  
Research Supervisor

Date: .....

## Approval Letter

This project work report entitled "A Study of Community Based Rural Water Supply and Sanitation Project; Impact Study in Dhaneshwor Scheme of Kabhre District ", submitted by Mr. Laxmi Prasad Upadhayay has been accepted for partial fulfillment of the requirements for the degree of Master of Arts in Rural Development under the Faculty of Humanities and Social Sciences.

Examination Committee

Head of the Department : .....

Supervisor : .....

Umesh Prasad Acharya

External Examiner : .....

Date: .....

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This report is a result of my long-lasting interest in the subject matter. I am indebted to many individuals and institutions. First of all, I would like to express my sincere gratitude to Lecturer Umesh Prasad Acharya, Research Supervisor, who provided guidance and supervision to prepare this project work. He also spent countless hours reading the manuscripts and also offered valuable suggestions and correction. I would like to thank Head Central Department of Rural Development Prof. Dr. Pradeep Kumar Khadka for his valuable suggestion and encouragement.

I would like to express my sincere gratitude to Rural Water Supply and Sanitation Fund Development Board (RWSSFDB) for their incredible help by way of providing me with support in the course of carrying out and completing the project work. I would also like to express my sincere gratitude to Dhaneshwar Water Supply and Sanitation User's Committee. Finally, I am alone responsible for errors of judgments or analysis.

**Laxmi Prasad Upadhayay**

## Executive Summary

*This is a field-based study to reflect the picture of the impacts of Community-based Rural Water Supply Project. This study is mainly based on primary data collected from the people of project area in the year 2007, which includes 13 respondents selected through the purposive sampling method. Questionnaires were prepared to capture the information from the 13 local households.*

*This Water Supply Project named Dhaneshwar Water Supply and Sanitation Scheme has the coverage area including ward no. 2 of Panauti municipality. Project was completed at 2001. The tapped flow from the Lampakha spring was 0.12 litre per second and in the design criteria population growth rate adopted was 1 per cent per annum and the design period was taken as 20 years. Design population was 867. There is a spring intake, a collection chamber, a distribution chamber, two reservoir tanks of capacity 10 cubic metre, transmission pipeline of 1964 metre length and distribution pipeline of 2753 metre length. Support organization was Shanti Jan Adarsha Youth Club, Dhulikhel. Per capita water consumption before the implementation of the project was 24 lpd and after implementation it was found 36 lpd. Approximate weighted average time to haul water before the implementation was 25 minutes and after the implementation it has been found to be reduced to 10 minutes only.*

*The number of households and the population initially was 105 and 705 respectively and present status is 125 and 810 respectively. There were 15 nos. of Public Tapstands and now it is 21. One Reservoir tank of capacity 8 cubic metre has been constructed to address the increased demand of water.*

*The project has been found successfully operating and the users are satisfied but they are found to be bothered remembering the difficulties and the challenges of the community contribution. Their suggestion was that the community contribution should be reduced and the project period must be shorter and the role of the NGO should be revised but the role of the technical consultants should be given the higher priority.*

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## Abbreviations/Acronyms

A.D.	–	After Death
ADB	–	Asian Development Bank
WB	–	World Bank
CBS	–	Central Bureau of Statistics
DDC	–	District Development Committee
DFID	–	Department For International Development
DWSS	–	Department of Water Supply and Sewerage
INGO	–	International Non-Government Organization
KM	–	Kilometer
MDG	–	Millennium Development Goal
MPPW	–	Ministry of Physical Planning and Works
NG	–	Nepal Government
NGO	–	Non-government Organization
No.	–	Number
RVT	–	Reservoir Tank
RWSSFDB	–	Rural Water Supply and Sanitation Fund Development Board
S.N.	–	Serial Number
UN	–	United Nation
UNDP	–	United Nations Development Program
VDC	–	Village Development Committee
VHP	–	Village Health Promoter
VMW	–	Village Maintenance Worker
WHO	–	World Health Organization
WUSC	–	Water Users and Sanitation Committee



# Chapter-One

## Introduction

### 1.1 Background

Water is the fundamental requirement for the human beings for their survival. Due to the lack of safe drinking water and sanitation about 6000 children die every day in the world which is equivalent to the 20 jumbo jets crashing everyday according to 2003 survey. In Nepal 48% people are deprived of safe drinking water and the 40% people are deprived of the sanitation according to the recent data published by UN. Millennium Development Goal has targeted to reduce the population which is deprived of safe water and sanitation to halves by 2015. We know that 80% diseases are caused due to the unsafe water and poor sanitation. Hence water supply and sanitation systems were major elements of the public health measures that drastically cut death rates and improved health levels in any countries. Though it is not generally appreciated, these measures have been considerably more important than curative medicine in contributing to good health, long life expectancy and low infant mortality. Infant diarrhoea, the largest killer in developing countries, is closely related to poor water quality. (*UN survey, 2004*)

Failure of many projects due to lack of proper care and lack of interest of the local concerned people lead to concept of community development. Although the concept of community development is not new for Nepal as many self help groups, indigenous organizations involving in community development since many years before the reunification of Nepal. But those organizations were not institutionalized. Now many development projects are implemented based on the concept of community development. Due to the feeling of ownership of the local concerned people the development projects will be sustainable to some extent. In this development strategy participation of the local people is ensured from the decision making stage to the operation and maintenance. (*Guidelines for Gravity Water Supply, 2005*)

The objectives of water supply projects are:

1. To Reduce the prevalence of water related diseases; and
2. To Minimize the hardship in collecting water. Safe water in close proximity is expected to ease the hardship imposed on women from the long walks and climbs while bringing water from distant sources.

The water sector program in Nepal is implemented by the Ministry of Physical Planning and Works (MPPW) through the Department of Water Supply and Sewerage (DWSS), the designated lead agency. After formation of Ministry of Housing and Physical Planning (MHPP) in 1987, it has issued the policy and procedures for implementing rural water supply schemes. The "Directives 2047" provides guidelines to implement water supply schemes within the DWSS program along a participatory framework. The users are to be involved in planning, construction, operation and maintenance of the schemes, which is to be achieved by forming water users' committee. Users' committees are to be formed in on going as well as rehabilitation schemes. (*KHASKOSH Newsletter*)

The project intends to provide Nepal a strategy to promote decentralization and involve beneficiaries and the private sector to a larger extent in rural water

supply and sanitation service delivery. To ensure local ownership and sustainability, the project will be demand driven. Communities will lead in making decision about the identification, design, implementation, operation and maintenance of their water supply and sanitation scheme. Support organizations i.e. NGOs, community-based organizations and private sector firms will help in implementing the schemes. Community development activities include community mobilization through workshops, group discussion, information and hygiene campaigns, participatory action planning, non formal education and hygiene and environmental sanitation awareness training. (<http://www.rwss.org>) Water supply scheme developed by the participatory approach is sustainable as it

1. Satisfies a felt needs.
2. Provides a sense of ownership.
3. Integrates health/hygiene education through women involvement.
4. Ensures operation and maintenance.
5. Uses local skill and resources.
6. Selects right level of technology.
7. Strengthen the local organizations.
8. Acts as catalyst for development.

## **1.2 Statement of the Problem**

As the one third of the Nepalese People are deprived of the fundamental facilities like food, clothes and Shelter and the Political Instability since many years (always transitional) no such effective steps taken in the study of the impacts of community based development especially in water supply and sanitation from government side. In the developing countries like Nepal Research and database collection is done by the donor agencies in the field of interests of their own. Hence it is difficult to get the actual idea about the impact as a whole. Water consumption is becoming the indicator of the development and the living standard of human being hence it is important task.

Many efforts have been made in the community based water supply and sanitation projects in rural area but actual problems and prospects has not been flourished. It is basically due to the Donor driven policies of the development. State lacks of the resources to fulfill the fundamental needs of the citizen like water supply so we have to be dependent upon the Donor agencies. These types of studies are necessary to aware the implementing agencies, Donors, Support Organization (NGOs) etc. in demand driven approach of the rural people who are voiceless. These types of studies will be the voice of those voiceless people and the guidelines for the implementing agencies in formulating the policies further.

This study basically focuses on the change in the life of the rural people after the implementation of the project and the sustainability of the water supply and sanitation projects in the rural areas. Others are as listed below;

1. Per capita water consumption and the adequacy for sanitation also.
2. Attitude of the people about the health and hygiene.
3. Time saved in fetching the water.

4. Utilization of the free time of women.
5. Operation and maintenance problem of the water supply project.

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

The general objective of the study is to find out the impacts of community based rural water supply project on health and productivity of the people and the sustainability of the project. The specific objectives are:

1. To assess the key aspects of the project such as the structures, pipeline and water quality.
2. To find out the health impact on people especially on women and children.
3. To find out the participation of women, indigenous caste/ethnicity and Dalit in the project.
4. To assess the operation and maintenance process of the project.

### **1.4 Significance of the Study**

Water is the fundamental requirement for the human being as well as other living being. Water required for drinking and sanitation is the human right and the state should have the responsibility of providing the sufficient and good quality of water. But the developing countries like our country Nepal are not capable of supplying the fundamental amenities. Due to this no. of Donor agencies are being involved in rural infrastructural development like UN, DFID, WB, ADB etc.

The study provides basic information and idea about the impacts of community based water supply projects in rural areas through the NGOs. This study also focuses on the attitude of the local people about the participatory approach and the difficulties they have faced during the implementation of the project with the assistance of the NGOs and finally the impact upon health and productivity and the sustainability of the community based rural water supply project. This study has the following significance.

- The study helps to assess the key aspects of the project such as the structures, pipeline and water quality.
- The study will be helpful to find out the health impact on people especially on women and children.
- The study helps to find out the participation of women, indigenous caste/ethnicity and Dalit in the project.
- The study explores the assess the operation and maintenance process of the project.

## **1.5 Scope and the Limitation of the study**

Any kinds of research works are done within certain area of limitation. It determines its nature, needs, situation and area of study. This study also limits within certain scope and limitation.

The present study is concerned to explore the idea about the impacts of the community based water supply and sanitation project in the scheme area only. The outcomes cannot be generalized in each aspects but some of the outcomes will be applicable to prepare and correct further plans and policies. This study is focused only in the particular scheme area the Dhaneshwar, Panauti Municipality ward no. 2 of Kavre district. It helps to explore the ideas and information about the participatory approach for the rural water supply and sanitation projects and the sustainability on the basis of limited indicators.

Study findings will contribute in the academic as well as development planning – gaps. Findings may reflect the clear scenario of water supply and sanitation, impact on health and productivity, involvement of the non-governmental sector, Policy instruments and institutional changes. As this study intends to find out the impact of the water supply scheme in institutional development, health and productivity, participation of disadvantaged and marginal communities, effectiveness, role of women, time saved etc. Hence it will indicate the actual condition of the drinking water and sanitation facility and its contribution in socio-economic development.

## **Chapter-Two**

### **Literature Review**

During the study, different types of related literature were reviewed through books, journals, articles, study report, news etc. Literature review is one of the important part of any research work. It contains mainly the conceptual as well as theoretical framework, empirical studies and policies and programs.

The Rural Water Supply and Sanitation Fund Development Board was established on March 14, 1996 by Government of Nepal through formation order under the Development Board Act 1956. Second Rural Water Supply and Sanitation Project (RWSSP-II , 2004-2009) under its implementation is a follow on to the successfully completed First RWSSP, 1996-2003. It has adopted the general principles and approaches of RWSSP-I with some improvements by incorporating the lesson learnt and overcoming the deficiencies in RWSSP-I. The project has been implemented with main assistance from the WB, IDA and co-financed by DFID-Nepal together with GON and the communities. Ministry of Physical Planning and Works (MPPW) is the line ministry of RWSSFDB. The Board is supervised and managed by a seven members of Board while its policies are executed 48 staffs comprising of 30 executive professional and 18 support staffs from its Head office, located at Kathmandu. Women empowerment, Social inclusion and the Financial transparency are the key focus of this project. RWSSFDB has a coverage of 71 districts out of 75 districts. In RWSSFDB policy community kind contribution is 26.7%, community cash contribution is 1.7% and the Board has the contribution of 71.6%. The Board has been implementing a demand driven community based rural water supply and sanitation project to promote cost-effective and sustainable development. Participatory development process in all stages of the project cycle including operation and maintenance has been accorded and recognized. Emphasis has also been accorded to community mobilization throughout the development and implementation phases, to awareness creation and to disadvantaged people in decision-making process, health, hygiene and sanitation, and income and employment generation. In accordance with government's RWSS sector policy; the project has focused to empower the rural communities in service delivery by developing a sense of

ownership and responsibility among them.( *Guidelines for Gravity Water Supply, 2005*)

The overall objective is to promote cost-effective and sustainable Rural Water supply and sanitation projects in order to reduce rural poverty. The project aims to raise the living standard of rural people by:

- ) Improving sector institutional performance and mainstreaming Fund Board approach user groups that can plan, implement, and
- ) operate drinking water and sanitation infrastructure that delivers sustainable health, hygiene and productivity benefits to rural households.

The project adopts a maximum of 37-month scheme cycle in gravity flow and 39-month scheme cycle in ground water scheme with pre-development, development and implementation phases and 24 months for post implementation. In Pre-Development phase SOs identified and selected, Demand placement and site appraisal and scheme/community selection are done. In Development phase community mobilization and preparedness, Registration of WSUG under the Water Resource Act in District, community Action Plans (CAPs) preparation then construction of latrines are done. In Implementation phase involves the Executions of CAPs, Construction of water supply scheme, construction of latrines, establishment of O & M fund, communities take ownership for operation, maintenance and management of the schemes. In Post implementation phase Monitoring, Necessary training to community, Linkage development with other programs, Strengthening coordination and the sustainability of the schemes is ensured. (<http://www.rwss.org>)

For the sampling procedure and data analysis different publication has been studied.

Sampling was done and taken only 10 percent due to the resource available,

Homogeneity of universe and the nature of study. Quota sampling has been adopted in this study identifying the different strata of population and from each stratum sample has been taken. (*Research Methodology,2004*)

## **Chapter-Three**

### **Methodology of the Study**

#### **3.1 Research Design**

The methodology applied to meet the objectives of the study. This study tries to solve that existing questions raised while working research as far as possible. This study has carried out on the basis of exploratory research design because the study focuses on the impact of community based rural water supply scheme and the related fields like comparative study on the traditional trends and practices in water resources management and water supply scheme. But some findings are descriptive hence the study is both descriptive and exploratory.

#### **3.2 Rationale for the Selection of the Study Area**

This study is done to find out the impact of community based rural water supply and sanitation scheme in different sectors like health and hygiene, participation of women, indigenous people, Dalit and the disadvantaged group in the water supply and sanitation scheme in rural areas. The another important feature of this study is to determine the sustainability of the scheme. This study area is suitable because this scheme has been completed in 2001. The scheme area is in proximity of Kathmandu valley hence easily accessible and it is required information can be easily assessed.

#### **3.3 Sampling Procedure**

The universe of study were the public who are using the community based water supply scheme and their experience as using the traditional sources of water like kuwa, pandhero far from their settlement. Hence certain percent of the households of different communities (considering the economic and educational status) will be sampled with quota sampling and random sampling will be used for household survey. For the selected village more than 10% households are taken.

#### **3.4 Sources of Data Collection**

Primary data are collected from household survey and the working organizations/ agencies. Secondary data were collected from the published and unpublished written documents from individuals, experts and organizations.

### **3.5 Data Collection Tools and Technique**

To generate the primary data, the structured questionnaire, semi or unstructured interviews and observations as well as focus group discussion methods have been applied.

These are as listed below:

- ) Questionnaire Survey
- ) Key Informant Interview
- ) Field Visit and Observation
- ) Focus Group Discussion
- ) Photographs

#### **Questionnaire**

The set of questionnaires prepared intending to capture the information about the response of the people towards the community-based development approach, its viability and challenges. It also focused on the measurable impacts that have been improved relative to the prior of implementation of Rural Water Supply and Sanitation project.

#### **Interview**

The structured and unstructured questions were asked to the different status peoples. Information was acquired about subject matter and its existing problem of the area.

#### **Observation**

The components of the Water Supply Project have been observed and found satisfactorily operating after 7 years of construction. Intake, Collection Chamber, Reservoir tank, Distribution Chamber, Public Tapstand and the pipeline are found in normal condition.

#### **Photography**

Photography also has become the source of data collections. Photographs have been taken by researcher himself and some were collected from different places. The list of the photographs have been kept in the appendix.



## **Chapter Four**

### **Sampling and Data Analysis Framework**

Simple statistical tools like mapping, photographs, charts, tables, graphs are used. Descriptive method have been used for qualitative data. Help of computer programme has been taken for the data analysis.

Numerous information have been collected through various techniques and methods are put together and analyzed in a separate chapter of interpretation. According to nature of data they are further split into separate sections as well as simple frequency, percentage tables, bar diagram and pie chart are also used to analyze data related to the study. The Project area consists of 125 households out of which 13 were taken as sample including Brahmin/Kshetri, Dalit, Newar, and Tamang.

Questionnaire has been prepared to capture the information for thirteen local households from different caste/ethnicity, different educational and economic status. The purposive sample procedure has been applied while choosing a sample unit. Number of households taken are as following:

SN	Caste/ethnicity	HH taken
1.	Brahmin/Kshetri	6
2.	Dalit	2
3.	Janajati (Newar and Tamang)	5 (Newar=3, Tamang=2)

## Chapter-Five

### Data Analysis

#### 5.1 Condition of Sanitation

Table no. 1: Distribution of the respondents according to the response towards Improvement in the sanitation condition after the implementation of Scheme.

Response	Respondents	
	Number	Percentage
Improved	7	53.85
Not Improved	4	30.77
No response	2	15.38
	13	100.00

Due to the availability of the sufficient water for drinking and other purposes the sanitation condition was found improved. This project does not only focuses on the water supply but also sanitation by promoting the health and hygiene program and the sanitation trainings.

#### 5.2 Reduction of time in water fetching

Table no. 5.2 : Distribution of the respondents towards the Time Saving due to the Project Implementation.

Response	Respondents	
	Number	Percentage
Upto 15 minutes	5	38.46
15 to 30 minutes	4	30.77
30 to 50 minutes	4	30.77
	13	100.00

Before the implementation of the Water Supply project people have to fetch water from nearby pandhero and Kuwa spending 15 minutes to 50 minutes per trip of water. But after the implementation of this project their water fetching time has been found to reduced to only 10 minutes.

### 5.3 Involvement of sex in fetching water prior to the implementation of the Project

Table no. 5.3: Distribution of the respondents towards the involvement of sex in water fetching.

Response	Respondents	
	Number	Percentage
Female	8	66.67
Male	1	8.33
Both	3	25.00
	12	100.00

Not only in this Project area but in our society role of women in water management is considerable same result has been found in the study. Due to the availability of water regularly in own tole made easy and the impact upon their health condition had improved.

### 5.4 Susceptibility of Water Borne Diseases like typhoid and Diarrhoea

Table no. 5.4 Distribution of the respondents towards the susceptibility of Water Borne Diseases.

Response	Respondents	
	Number	Percentage
Reduced drastically	7	53.85
Reduced moderately	3	23.08
No response	3	23.08
	13	100.00

The Water Borne diseases has been found to be reduced.

### 5.5 Saving in Treatment cost in Water borne Diseases

Table no. 5.6 Distribution of the respondents towards the Saving in Treatment cost.

Response	Respondents	
	Number	Percentage
Less than Rs. 1000	2	15.38
Rs. 1000 to 3000	6	46.15
Greater than 3000	5	38.46
	13	100.00

5.6 Utilization of free time that has been saved due to the availability of water nearby the house.

Table no. 5.6 Distribution of respondents towards the utilization of free time.

Response	Respondents	
	Number	Percentage
Vegetable farming	4	30.77
Goat keeping/Poultry farming	5	38.46
Others	4	30.77
	13	100.00

The free time that have been saved due to the availability of the water at nearby location from the house especially the women now enjoying more free time and they had utilized it by involving in income generating activities like Vegetable farming, Goat keeping, Poultry farming, Tailoring, Shop keeping etc.

#### 5.7 Condition of the Project Structural Components

During the observation of the Structural components such as Intake, Pipeline, Reservoir tank, Source Protection and Public Stand Posts were found to be functioning regularly without maintenance during 6 years.

#### 5.8 Operation and maintenance

Operation and maintenance fund has been established initially, due to the intake maintenance and certain section of the pipeline has been reconstructed so now the fund is only 1 lakh 25 thousand and it is for the future unexpected damage. The tariff collection from the users is another source for operation and maintenance one sanitation worker is appointed for the daily operation. Presence of the women and Indigenous in the User's committee shows the participation.

#### 5.9 quality of water

Water quality is determined by the lab test twice a year and till now there is no significance harmful ingredients have been observed during the testing. Hence water is potable. In case of source protection fencing is done around the source and there is no entry of animals, plantation and so chance of pollution due to external factors has been minimized as much as possible.

## **Chapter-Six**

### **Problems and Prospects of Community based Development Approach in Rural Areas**

One of the most important problem in the participatory approach in the development projects like water supply is to mobilize the community as per Donor's requirement and the management of the public contribution both cash and kind contribution. Another problem is the timely delivery of the resources at the project site hence timely completion of the project within the scheduled time frame is very much difficult.

Attitude of the public towards participatory approach

1. Community contribution is found to be too high.
2. Involvement of NGO is not public oriented its only profit oriented.
3. It is found to be difficult to mobilize the community in labor contribution as well as cash contribution.

## **Chapter-Seven**

### **Conclusion and Recommendation**

#### **7.1 Conclusion**

The Water Supply components were in normal condition and functioning as expected. Capacity of the source also was sufficient as expected in design. Water borne diseases found to be reduced drastically after the implementation of the water supply and sanitation project within these five years. In women the burden of fetching the water in Gagri using Doko had been reduced. People are less susceptible to water borne diseases. It was found that there is the participation of the women, Indigenous group and Dalit not only in the community contribution but also in Users committee from planning phase up to operation and maintenance phase. Operation and maintenance of the project has been found to be satisfactory and going on smoothly with the one maintenance staff and the provision of operation and maintenance fund and the monthly water tariff collection from the users. Due to the user's participation through the planning phase to the implementation phase they are proud and ownership upon the project has seemed quite satisfactory, the ultimate goal of the community-based, participatory development approach. Observing the scenario five years after the implementation of the project sustainability.

#### **7.2 Recommendations**

##### **7.2.1 Recommendations for management**

The user's contribution should be reduced. Role of NGO should be revised it should be only coordination part not the implementation part. Man month of the Engineering consultant should be increased so that users can get support frequently. The project period should also be shortened 36 months of project duration is much more and people could not be confident before the procurement of the construction materials and Pipe. Peoples were in doubt in the construction of the water supply components due to the lack of technical manpower. Hence priority should be given to the timely delivery of the technical input during the construction period. The involvement of the NGOs should only for the social part.

### **7.2.2 Recommendations for further Study**

According to the public suggestion, Project modality and the experience of the RWSSSFDB itself further study is essential to revise the role of the NGOs, users and the Project Period. Another important part is that the community contribution should be clear in modality either in cash or kind not both. Further study is essential in case of the modality and the amount of the community contribution.

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### **Questionnaire Model Prepared for Local Peoples**

अन्तरवार्ता दिनेको नाम थर :-

१. जातजाति:-

२. भाषा :-



३ लिङ्ग :-

(क) पुरुष

(ख) महिला

४. अन्तरवार्ता दिने घरमूली:- हो ♦ होइन ♦

५. घरमूली:- (क) पुरुष ♦ (ख) महिला ♦

६. घरमा बसोबास गरेको जनसंख्या : पुरुष  महिला  जम्मा स

७. पारिवारिक विवरण तथा शैक्षिक स्थिती :-

क्र. सं.	नाम/थर	घरमूली संगको नाता	उमेर (वर्ष)	लिङ्ग	शैक्षिक स्थिति		पेशा	कैफियत
					पुरुष	महिला		
१								
२								
३								
४								
५								

८. आर्थिक अवस्था

८.१ तपाईंको परिवारलाई आफ्नो कृषि उत्पादनबाट कति महिनासम्मलाई खान पुग्छ ? तलको कोठामा ( ) चिन्ह लगाउनुहोस् ।

(क) ३ महिनासम्म खान पुग्छ ♦

(ख) ३ देखि ६ महिनासम्म खान पुग्छ ♦

(ग) ६ देखि १२ महिनासम्म खान पुग्छ ♦

९. तपाईंले निम्न मध्ये कुन श्रोतको पानी प्रयोग गर्नु हुन्छ ?

१) धारा ♦	२) कुवा/इनार ♦	३) खोला, नदी, पोखरी ♦
४) मूल ♦	५) हैण्ड पम्प ♦	६) अन्य ♦

१०. माथी उल्लेखित श्रोतबाट दैनिक खानेपानी आवश्यकता परिपूर्ति गर्न कति पटक, कति लिटर र कति समय लगाएर पानी संकलन गर्नु हुन्छ, सो को विवरण निम्न तालिकामा दिनुहोस् ।

क्र. स	विवरण	पानी ल्याउने व्यक्ति				कैफियत
		पुरुष	महिला	वालक	वालिका	
१.	कति पटक/खेप					
२.	कति लिटर					
३.	पानी ल्याउन लाग्ने समय मिनेटमा					
	) पानीको मुहान सम्म पुग्ने					
	) मुहानमा पर्खनु पर्ने समय					
	) मुहानबाट फर्कदा लाग्ने समय					

११. तपाईंले हाल प्रयोग गर्नु भएको पानीको लागि कति रकम खर्च गर्नु भएको छ ?

रु. ◆

१२. तपाईंले प्रयोग गर्नु भएको पानीको मासिक महशुल कति तिर्ने गर्नु भएको छ ?

१३. वचतको समयमा यदि आयमूलक कार्य गर्न चाहनु हुन्छ भने स्थानीयस्तरमा उपलब्ध स्रोत साधन तथा तपाईंमा भएको सीपलाई उपयोग गर्न कस्तो प्रकारको आयमूलक कार्यक्रम गर्न चाहनु हुन्छ ।

- |                |               |
|----------------|---------------|
| क) तरकारी खेती | ख) कुखुरापालन |
| ग) फलफूल खेती  | घ) वाखापालन   |
| ङ) वंगुरपालन   | च) मौरीपालन   |
| छ) अन्य        |               |

१४ शौचालय

१४.१ घरमा शौचालय बनाउनु भएको छ ? छ ◆ छैन ◆

१४.२ बनाएको छ भने कुन प्रकारको छ ?

- ◆ खाल्डे चर्पी      ◆ पोर फ्लस प्यान      ◆ साधारण प्यान      ◆

अन्य

१४.३ शौचालय बनाएको छैन भने किन नबनाएको ?

- ◆ आवश्यक नभएर      ◆ थाहा नभएर      ◆ पैसा नभएर

१५. व्यक्तिगत सरसफाईमा सधार भएको छ, कि छैन ?

- ◆ छ      ◆ छैन

१६. बितेको एक बर्ष भित्र तपाईंको घरका मानिस कुन कुन पानीजन्य रोगले बिरामी परे तल दिएको कोठामा बिरामी संख्या उल्लेख गर्नुहोस ।

क) भाडापखाला

ख) आँउ

ग) हैजा

घ) भाइरल हेपाटाइटिस (जन्डिस)

ङ) टाईफाईड

च) जुका

छ) ट्रकोमा (

आँखा पाक्ने रोग)

ज) पोलियो

झ) लुतो (छाला सम्बन्धी रोग)

ञ) अन्य उल्लेख गर्नुहोस :

१६. बिरामीको उपचार कसरी गरियो ?

क) अस्पताल/हेल्थ पोष्ट गएर ◆

ख) धामी भाक्रीकोमा गएर ◆

ग) अन्य उल्लेख गर्नुस् ◆

१७. बिरामीको उपचार गर्दा कति खर्च लाग्यो ?

रु .....

१८. बिरामी हुँदाका बखत कति दिन काममा बाधा पऱ्यो ?

..... दिन ।

**Appendix-I**  
**photographs**



