

**Health Impact Study of the Rural Water Supply and Sanitation  
(RWSSP-WN) Program**

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Rural Water Supply and Sanitation Project-Western Nepal (RWSSP-  
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Hospital Chowk, Pokhara**

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The Executing Agency of the Project is the Ministry of Federal Affairs and Local Development (MFALD). Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR), together with participating District Development Committees (DDCs) and Village Development Committees (VDCs) implements the Project.

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## ABBREVIATION

ADB	Asian Development Bank
ADDCN	Association of District Development Committees in Nepal
ARI	Acute Respiratory Infection
BSP	Basic Sanitation Package
CBO	Community Based Organization
CGD	Child, Gender and Differently-abled Friendly
CLTS	Community Led Total Sanitation
DDC	District Development Committee
DEO	District Education Office
DOE	Department of Education
DSS	District Sanitation Section
DSO	District Sanitation Officer
DoHS	Department of Health Services
DoLIDAR	Department of Local Infrastructure Development and Agriculture Road
DPHO	District Public Health Office
DTO	District Technical Office
D-WASH-CC	District Water, Sanitation and Hygiene Coordination Committee
DWDO	District Women Development Office
DWSS	Department of Water Supply and Sewerage
DWSSCC	District Water Supply and Sanitation Coordination Committee
FEDWASUN	Federation of Water and Sanitation Users Nepal
GoN	Government of Nepal
I/NGO	International/ Non Government Organization
IEC	Information, Education and Communication
JAKPAS	Jantako Khane Pani Ra Sarsafai
MDG	Millennium Development Goal
MLD	Ministry of Local Development
MoES	Ministry of Education and Sports
MoHP	Ministry of Health and Population
MPPW	Ministry of Physical Planning and Works
MWCSW	Ministry of Women, Children and Social Welfare
NAVIN	National Association of Village Development Committee in Nepal
NHSSC	National Hygiene and Sanitation Coordination Committee
NHSSC	National Hygiene and Sanitation Steering Committee
NPC	National Planning Commission
NSW	National Sanitation Week
ODF	Open Defecation Free
PAF	Poverty Alleviation Fund
R-WASH-CC	Regional Water Sanitation and Hygiene Coordination Committee
RVWRMP	Rural Village water Resources Management Project
RWSSFDB	Rural Water Supply and Sanitation Fund Development Board
RWSSP-WN	Rural Water Supply and Sanitation Project in Western Nepal
SOPHEN	Society of Public Health Engineers in Nepal
SLTS	School Led Total Sanitation
SSHE	School Sanitation Hygiene Education
SWC	Social Welfare Council
VDC	Village Development Committee
V-WASH-CC	VDC Water, Sanitation and Hygiene Coordination Committee
WASH	Water, Sanitation and Hygiene
WECS	Water and Energy Commission Secretariat
WSSD/SDO	Water Supply and Sanitation Division/Sub Division Office

## **TEAM MEMBERS**

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## **EXECUTIVE SUMMARY**

### **Background**

The history of Sanitation efforts in Nepal is a recent phenomenon. The systematic effort for sanitation promotion in Nepal dates back to the 1980s along with the United Nations (UN) declaration of the International Decade of Drinking Water Supply and Sanitation. Since then, promotion of sanitation has been taking place as an integral component of water supply projects. However, major effort on sanitation is found to have started from the early 90s. In the recent years, sanitation has been recognized as the basis of health, dignity and development. (GoV (2010): Sanitation and Hygiene Master Plan, GoN)

### **Policies and Strategies on Sanitation of Government of Nepal**

The policies and strategies related to hygiene and sanitation in the country are National Sanitation Policy-1994, Water Supply Sector Policy -1998, Rural Water Supply and Sanitation National Policies, Strategies and the Sectoral Strategic Action Plan 2004, Nepal Water Plan -2005, Vision Paper of MPPW -2007, the Urban Water Supply and Sanitation Policy 2009 and the Three Years' Approach Paper (2010-2012). By reviewing these policies, the following compliance and non-compliances are noted.

### **Rationale of RWSSP-WN Implementation**

There were key challenges for the slow progress of hygiene and sanitation in the country. RWSSP-WN identified the challenges and implemented Community Led Total Behaviour Change in Hygiene and Sanitation (CLTBCHS) approach to reduce them simultaneously.

During the inception phase of the Project it was found out that the present water and sanitation projects in Nepal focus mainly for water supply construction with limited and minor inputs to hygiene and sanitation. The concentration of those projects is merely to increase the access to water supply and sanitation only and they do not aim to change the behaviour and habits of the people in water management, hygiene and sanitation. The latter would have greater impact on to the improved health and thus improved livelihood.

### **The Project has four major components**

1. Domestic water supply
2. Hygiene and sanitation
3. Arsenic mitigation and
4. WASH governance.

It is estimated that in water supply 70,000 new people have benefited from RWSSP-WN support. Likewise 250,000 people benefited from RWSSP-WN support in sanitation and hygiene.

### **Objectives of the Assignment**

The objective of the assignment is to assess the impact created through the RWSSP-WN intervention which will be measured by the following indicators.

1. Incidence of diarrhoeal diseases during last 6 years i.e. 2063/64 to 2068/69
2. Child mortality under 5 during last 6 years i.e. 2063/64 to 2068/69

## Methodology

### Sampling

1. Total Program VDCs 54 + 2 wards= 56 Subject units
2. Sampled Districts 9 and sampled VDCs 18

Total HH Interview	90x2= 180
Total KII	45x2=90
Total FGD (VWASH Committee)	5x2= 10
Total S/HP records	9x2=18

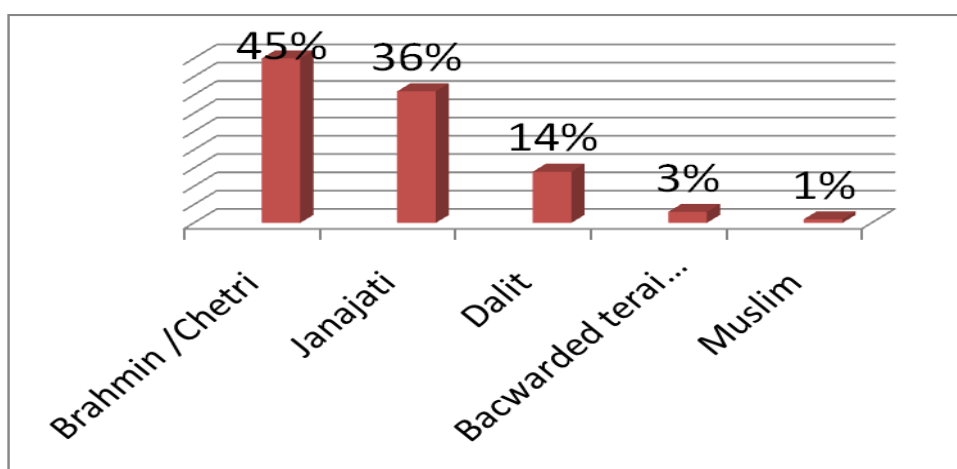
**Document reviewed:** A total of 20 documents were reviewed.

**Time frame:** 24 February to 23 April 2013

### Finding and Discussion: Household Survey

#### Ethnicity of the study population

In both Terai and hills, a total of 180 respondents were interviewed in the sampled HH. Of them, majority were of Brahmin/Chhetry (45%) followed by Janajati (36%), Dalit (14%), Backward terai (3%) and Muslim and others (1% each). This indicates that the systematic random sampling have covered most of the ethnic group as in the proportion of the ethnic settlements and as of national proportion.



#### Family description

In the total terai and hills (9 districts and 18 VDCs and 180 HH) there were 51 percent of male and 49 percent of female. The average total (terai and hill) family size is 5.3 per family and sex ratio (male female) is 1.04 (1.04 males for 1 female).

#### Description of below one year children

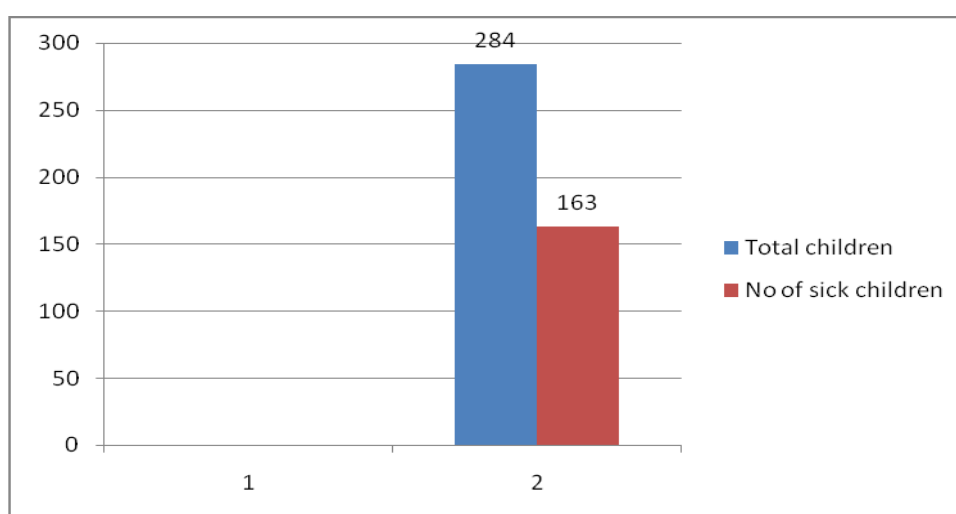
In all nine districts of both hills and terai and in 18 VDCs, 38 (64%) male and 21 (36%) female found at 180 sampled HH. The average HH below one year child per HH found to be 3 children in both hills and terai districts.

### Description of below 5 year children

In both, hills and terai sampled districts, the below 5 years children by sex found to be 56% male and 44 percent female. A total of 225 children in 180 households are found. The average child per household is 1.25 children. Average male child per house is 0.7 and female is 0.55.

### Mortality and morbidity of children and mothers

There was no single case of death (mortality) of the children and mothers. The morbidity of the children reported as of 163 children out of 284 (57.4%) who were sick within one year. The types of sickness were fever, ARI, diarrhoea, common cold. Likewise, 169 mothers of the 180 HH, (one HH have more than one women) were sick. The sickness types were fever, body pain, UTI, menstruation inconsistency, etc.



### Knowledge on prevention of diarrhoea

The responses were more than one on the knowledge on the reasons and prevention from diarrhoea, and feeding during diarrhoea. The respondents have sufficient knowledge about the reasons and prevention from diarrhoea. Out of 180 respondents, 155 responses (more than 86%) said the reasons for diarrhoea is by eating dirty foods, followed by contaminated water 135 ((75%), eating passed days foods 123 (more than 68%), playing in dirty places, dirty body and eating whatever available.

### Incidence of diarrhoeal diseases

The diarrhoeal disease was reduced after the RWSSP-WN implementation. The determinants of diarrhoea before implementation were open defecation, contaminated food and drinking water, poor personal hygiene, cultural taboos as no liquid fed during loose motion, no breast milk to children during diarrhoea, ignorance, poverty, no knowledge and the like. These issues were covered by RWSSP-WN and had changed significantly with better behaviour change in handling diarrhoea and took preventive measures.

### **Open Defecation Free (ODF) and possible health issues**

A total of 150 (83%) said that ODF was declared within this year (2011-2012) and remaining was declared ODF two years back.

### **Child health problems on Pre and Post of ODF**

Among the respondents, every person gave their opinion in each topic as before ODF their children had more frequent diarrhoea which was significantly reduced after some periods of ODF declaration. Likewise, they had wasted children before ODF declaration which has been reduced significantly. There were many malnourished (all sorts of malnourishment) children before ODF and has reduced after some periods of ODF declaration. The high ARI, loss of appetite, expense on treatment, in capability to play of their children before ODF have significantly changed as the children were less sick, eating good volume of food, reduction on treatment costs, well play and smiling after some periods of ODF declaration

### **Pregnancy care**

Out of 180 HH, 118 (65.5%) have the practice of taking regular weight during pregnancy. Of them, 143 have taken TT injection and 129 took iron tablets from the health service outlets. The ANC checkups for four times are more than one, two and three times. More families have planned for institutional delivery rather than home assisted by family, at home assisted by trained midwives.

### **Observation of household situation**

The observation found the water was available for household use; soap for hand washing also found; few toilets had excreta outside toilets (11%); water shield was available; clean slab available; mosquito and fly was found; separate pot (only for washing after defecation) was found; available of toilet brush, detergent, ash, and the toilet easy to use by children and disabled.

### **Qualitative Findings (FGD and KII)**

#### **What sorts of health, hygiene and sanitation project have been implemented in the district/VDC**

The RWSSP-WN has started comprehensive programme as a determinants of health and healthy lives for better preventive measures form ill health. Construction of toilet, water supply, hygiene education ultimately controls diarrhoea, malnutrition and other human health problems. For this, huge amount of physical, human, financial and infrastructural resources have been invested by RWSSP-WN in districts, VDCs and wards, institutions, public concern places and household level.

#### **How the project has contributed to control diarrhoea (Explain pre and post project condition)**

The diarrhoeal condition in the pre implementation of RWSSP-WN was worse. The household survey also has revealed the condition was worse such as diarrhoeal incidence was frequent and high, high rate of malnutrition, loss of appetite of the children, expensive

treatment costs, children were reluctant to play, could not eat well and mortality and morbidity of children was high and likewise. After this programme, all have been sorted out.

### **How the project has contributed to promote Hygiene and Sanitation (Explain pre and post project condition).**

The discussion and KII responses revealed that the hygiene and sanitation status of the people before RWSSP-WN programme was too poor. The situation for water supply, hygiene and sanitation was extremely poor. But, after the programme of RWSSP-WN, gradually the situation improved and in this stage now, no one is in crisis of water.

### **How the project has contributed to reduce maternal and child mortality (Explain pre and post project condition)**

The maternal and child morbidity and mortality was high before the programme due to their traditional practices, cultural taboo such as no liquid during diarrhoea, food taboos during pregnancy, lactating period. Personal care during menstruations, home delivery, poor diet and hygiene, open defecation, contaminated water use, animal husbandry within the house, illiteracy and unawareness on household workload distribution, gender biasness, big family size, low short spacing of birth and many more opined by FGD and KII participants.

After RWSSP-WN programme within five years duration, all previous *practices* have converted towards positive *systems*.

### **How the project has contributed to promote health and Nutrition**

The traditional practices have been converted to system such as regular ANC, TT injection and de-worming during pregnancy, use of ORS and liquids and treatment during diarrhoea, proper and nutritious foods to all members especially to children, pregnant and elderly persons, proper sanitation, good personal hygiene and its habits such as hand washing, bathing, washing clothes etc, use of safe water, separating animal sheds outside home, good sewage, managing properly children's excreta, no open defecation, better knowledge, empowerment, inclusion of excluded groups in programme equally with other people, etc are the contribution made by RWSSP-WN during programme periods.

### **Roster Analysis**

#### **Roster Analysis of the Health Institutions of RWSSP-WN Working Districts/VDCs**

The roster of health institutions were observed and recorded in the sampled VDCs. There are 13 out of 18 sampled health institutions records, others had no records. The information on the incidence of diarrhoeas, child morbidity, mortality, as well as maternal morbidity and mortality were recorded. All health institutions have poor records. Those who have records have shown reduction of diarrhoea and maternal morbidity. No any mortality of both maternal and child was recorded in the health institutions.

## **Conclusion and recommendation**

### **Conclusion**

The life styles of the people have changed. The behaviours related to hygiene and sanitation has changed significantly. The morbidity and mortality is reduced significantly of the children and mothers. No persons are in scarcity of toilet and drinking water. All ethnic groups especially dalits and marginalised are in position like other people. The rural water supply, hygiene and sanitation programme in western Nepal (RWSSP-WN) have successful achievements in the programme districts and VDCs.

### **Recommendation**

The programme would be better to replicate in other districts and VDCs where open defecation and scarcity of water are the problem in Western and Far Western Regions.

Regular monitoring and supervision, maintenance of the water sources and toilets of the implemented VDCs are necessary.

The records of health institutions are too poor. They should be encouraged to make report through DHO/DPHOs in the respective districts

Regular advocacy, health education, counselling on the importance of hygiene and sanitation are necessary.

Refreshers training on hygiene, sanitation and skill development are the demand from the users' group and committee members, this should be organised.

## **CHAPTER 1:**

### **1. GENERAL INTRODUCTION/BACKGROUND**

The history of Sanitation efforts in Nepal is a recent phenomenon. The systematic effort for sanitation promotion in Nepal dates back to the 1980s along with the United Nations (UN) declaration of the International Decade of Drinking Water Supply and Sanitation. Since then, promotion of sanitation has been taking place as an integral component of water supply projects. However, major effort on sanitation is found to have started from the early 90s. In the recent years, sanitation has been recognized as the basis of health, dignity and development. (GoV (2010): Sanitation and Hygiene Master Plan, GoN)

#### **1.1 SITUATION ANALYSIS: HYGIENE AND SANITATION SITUATION**

##### **Sanitation Coverage**

The goal of the Master Plan of GoN is to attain universal access to improved sanitation by 2017 for better hygiene, health and environment. To achieve the goal, the milestones are set as follow:

- Milestone 1 : Toilet coverage of 60% of the total population by 2012/13
- Milestone 2 : Toilet coverage of 80% of the total population by 2014/15
- Milestone 3 : Universal toilet coverage by 2016/17

There has been an increase in toilet coverage in the country from six per cent of the population in 1990 to 43% in 2009. The annual growth rate of sanitation increment thus stands at 1.9% over the years.

The toilet coverage in urban areas is 78% against the rural coverage of only 37%. It proves that there is big disparity between urban and rural sanitation, although urban areas have other urban specific problems of solid and liquid waste. Interestingly, urban toilet coverage has stagnated at around 80% since 2000. The trend analysis shows that if the present trend is continued, the toilet coverage will be only 80% against the national target of universal coverage in 2017.

Moreover, the master plan gives the due focus on sustainable changes on hygiene behaviors including the proper use of toilet and waste management practices in urban and rural areas.

The far and mid western development regions have the least sanitation coverage with only about 30%, whereas, western development region has the highest sanitation coverage with about 53% of the respective total regional population. The Western Development Region has now better sanitation situation due to the programme implemented by RWSSP-WN.

In the RWSSP-WN programme area, the total target population of the hygiene and sanitation is 250,000 of 54 Village Development Committees (VDCs) and 2 wards of the Ramgram municipality of 9 programme districts.

Till 15 November 2012, a total of 45 VDCs out of 54 programme VDCs have declared Open Defecation Free (ODF). The total cumulative number of ODF VDCs in the programme districts has reached 223 VDCs including 178 replicated VDCs.

The net cumulative contribution of the RWSSP-WN's intervention in its program VDCs has yielded 30,012 new toilets. In addition, the net cumulative contribution of the RWSSP-WN intervention in the replicated VDCs has yielded to 83,561 new toilets. Altogether 113,573 households have built new toilets benefiting a population of 671,154 (484,807 in replicated VDCs and 186,347 in program VDCs). In the ODF declared VDCs, RWSSP-WN is focusing on the post ODF follow up activities where everyone expects to practice the five key hygienic behaviours as described in the National Sanitation and Hygiene Master Plan.

## **1.2 URBAN SPECIFIC ISSUES**

- 12 percent of urban households are connected to the sewer systems or to open drains.
- It is estimated that urban households generate 0.48 kg solid waste per capita per day.
- At this rate, the urban population generates 1,958 tons of solid waste per day or over 700,000 tons per year.
- Estimates also reveal that about 83% of the total waste generated is household solid waste, whereas, agricultural wastes are 11% and industrial waste 6%.
- Only Kathmandu valley produces 29% of the total waste generated in Nepal.
- About 45 percent of urban residents are served by waste collection systems with more than half the waste generated is not collected.
- The liquid wastes that are drained through sewers are disposed to rivers without prior treatment.



## **CHAPTER 2**

### **2. RATIONALE OF RWSSP-WN IMPLEMENTATION**

There were key challenges for the slow progress of hygiene and sanitation in the country. RWSSP-WN identified the following challenges and implemented Community Led Total Behaviour Change in Hygiene and Sanitation (CLTBCHS) approach to reduce them simultaneously.

#### **2.1 THE CHALLENGES WERE**

- Sanitation sector activities occupied inadequate priority in the past;
- Investment in the water and sanitation sector is still inadequate in relation to requirements;
- Planning and programming is patchy - stakeholders lack a consolidated target of toilet coverage either at VDC/ municipality or district level;
- There is lack of breakdown of national targets into local level planning and targets;
- Lack of uniformity in approaches of hygiene and sanitation financing is prevalent;
- The poor, disadvantaged and high risk groups are outside of the sanitation mainstream, causing constrained equity, ownership and participation;
- Local government bodies are not mainstreamed and hence are less involved in the development of hygiene and sanitation sector activities;
- There is lack of commitments of political entities at all levels;
- Regional Water Supply and Sanitation Coordination Committee (RWSSCC) and DWSSCC remained less proactive in matter of hygiene and sanitation promotion;
- Urban sanitation (solid and liquid waste management) is a high cost and high technical development intervention;
- Lack of awareness on the principles of the 4Rs (reuse, refuse, reduce and recycle) among urban people and lack of commitment from the government and other stakeholders in this direction.

#### **2.3 GENESIS AND ACHIEVEMENTS OF RURAL WATER SUPPLY AND SANITATION PROJECT IN WESTERN NEPAL (RWSSP-WN)**

##### **Project Background**

##### **Ventures from**

The Government of Nepal  
Ministry of Local Development  
Department of Local Infrastructure and  
Agricultural Roads

The Republic of Finland  
Ministry for Foreign Affairs

Project name	Rural Water Supply and Sanitation Project in Western Nepal
Sector	Rural Water Supply and Sanitation; Micro-infrastructure
Type of the project	New
Competent Authorities	The Government of Nepal; Ministry of Finance

Project Agreement signing date"	The Republic of Finland; Ministry for Foreign Affairs	
Project budget code number	May 22, 2008	
Starting budget year	Not available	
Termination budget year	August 2008	
Project status	July 2012	
Project area	On-going	
Project implementation organization	Western Development Region	
	Dhawalagiri zone: Districts of Baglung, Myagdi and Parbat	
	Gandaki zone: Districts of Syangja and Tanahun	
	Lumbini zone: Districts of Kapilvastu, Rupandehi and Nawalparasi	
	Mid-Western Development Region	
	Rapti zone: District of Pyuthan	
	Government of Nepal:	
	Ministry of Local Development;	
	Department of Local Infrastructure Development and Agricultural Roads	
	District Development Committees of participating districts	
Project Budget	Village Development Committees	
	Users	
	Government of Finland	
	Ministry for Foreign Affairs of Finland	
	Embassy of Finland in Kathmandu	
Foreign currency source	Consultant	
	The Government of Nepal: NRs 292,677,000	
	The Government of Finland: Euro 9,703,000	
	District Development committees: 3% calculated from the water supply investment costs and 5 % calculated from the hygiene and sanitation promotion costs	
	Village Development Committees: 2,5% from the water scheme construction costs and 10 % from the VDC WASH plan and hygiene and sanitation promotion costs	
Strategy and approach	Users: 21 % for the construction and O&M calculated from the construction costs of the water scheme (1% in cash and 19 % in kind for construction and 1% for the O&M)	
	Grant	
Coordination and supervision	Alignment, decentralization, downward accountability, institutional and human resource capacity development, gender and social inclusion mainstreaming, programmatic approach, ownership and behavioral change approach	
	Steering Committee	Monitoring and supervision
	Project Management Committee	Management, monitoring and supervision

District Development Committees	Management and execution
District Water Supply and Coordination Committee	Coordination and harmonization
Village Development Committees	Facilitation, supervision
Water Users' and Sanitation Committees	Implementation and management

## **2.4 HISTORY OF RURAL WATER SUPPLY AND SANITATION PROJECT IN WESTERN NEPAL (RWSSP-WN)**

Governments of Nepal and Finland have supported Rural Water Supply and Sanitation Sector in Nepal since 1989. The first two projects supported were the phases I and II of the Rural Water Supply and Sanitation Project (RWSSP) in Lumbini Zone; and the third one in the third phase of the same as the Rural Water Supply and Sanitation Support Programme (RWSSSP). The RWSSSP was phased out at the end of 2005. In order to transfer the experience of these districts and Lumbini zone to new districts, GoN proposed to replicate the Programme. This was the initiation for Rural Water Supply and Sanitation Project in Western Nepal (RWSSP-WN).

Implementation of the RWSSP-WN was supposed to begin in 2005. Due to political situation in Nepal, Finland amongst many other cooperation partners of Nepal postponed her new development projects in Nepal. After the democratic transition started in April 2006, Finland decided to restart the postponed projects and thus the preparations for RWSSP-WN continue. Agreement between the two governments on the Rural Water Supply and Sanitation Project was signed in 2008 and the project started in August 2008. The project is to phase out by August 2012.

In addition to RWSSP-WN there is another Finnish funded water project running in Far West, namely the Rural Village Water Resource Management Project (RVWRMP) that was started in October 2006 and continued till the end of August 2010. Whereas RWSSP-WN concentrates on sanitation, hygiene and water supply the RVWRMP operates with integrated water resource management principles, having livelihood development and small scale hydropower and irrigation components.

## **2.5 RATIONALE BEHIND THE PROJECT**

During the inception phase of the Project it was found out that the present water and sanitation projects in Nepal focus mainly for water supply construction with limited and minor inputs to hygiene and sanitation. The concentration of those projects is merely to increase the access to water supply and sanitation only and they do not aim to change the behavior and habits of the people in water management, hygiene and sanitation. The latter would have greater impact on to the improved health and thus improved livelihood.

Secondly it was proposed during the inception phase that the Project funding modality should be changed from the consultant based “project funding” to the Government to Government “investments funding” thus paving the way for programmatic and sector focused approach and increased ownership. Furthermore the GON-to-GON funding channel should not end at the district level but should continue to VDC and community level as well.

Thirdly it was found that all water and sanitation projects in Nepal have their own project specific manuals and guidelines, which are not harmonized and therefore causing confusion and additional burden for the districts’ government officials to cope with different approaches, methodologies and rules. All these projects follow “project approach”. The confusion is further added at the VDC and community level as well where several actors with different rules and approaches implement projects at village level; and in many cases by-passing Local Bodies. Therefore it was proposed that instead of following same “project approach” the RWSSP-WN had aimed for permanent change in Water Supply, Sanitation and Hygiene (WASH) approach harmonization. This new approach in WASH aimed for harmonized, coordinated and programmatic District. WASH Implementation to achieve universal access targets before 2017 as set by the GON. The role of the RWSSP-WN is to support the development and implementation of Local Bodies owned gender sensitive and inclusive WASH strategies, approaches and methodologies.

Fourthly it was found out that the focus of the original project document was towards Integrated Water Resource Management (IWRM) as already practiced by the RVWRMP in Far West. It was proposed and already endorsed by the GOF that instead of implementing two similar projects in Nepal, it would be better to divert from the RVWRMP’s IWRM approach toward coordinated and harmonized WASH sector support approach with focus on improved health and nutrition and using hygiene and sanitation as an entry point at VDC level instead of water resource/supply.

Fifth observation was that during the inception phase the Master Plan for Sanitation and Hygiene in Nepal, 2009-2017 as well as Single Approach for Planning, Implementation and O&M of Rural WATSAN Programs (2009), were just emerging. These documents as well as the ongoing discussions and debate between the two Ministries of MLD and MPPW regarding the Sector Wide Approach (SWAp), offer excellent opportunity for RWSSP-WN to act as a bridge and action research for the WASH sector development in Nepal and thus revision of the project Document was done.

## **2.6 OVERALL OBJECTIVE, PURPOSE AND OUTCOMES OF THE PROJECT**

The overall objective of the Project is the increased wellbeing of the poorest and excluded households. Underlying the overall objective and the project approach is the notion that lack of water supply, sanitation and hygiene causes poverty. Thus fulfilling the needs of the poorest and the excluded regarding water, sanitation, hygiene and nutrition and providing them opportunities to increase their own wellbeing through decentralized governance system will reduce poverty resulting in higher productivity and income.

The purpose of the project is to fulfill the basic needs and ensure rights of access of the poorest and excluded households to safe domestic water, good health and hygiene through decentralized governance system.

The expected outcomes of the project are as follows

- Increased women's productive role (time and energy)
- Decreased hardship, gender and social discrimination linked with water, sanitation and hygiene
- Improved health, nutrition and hygiene of community people in program districts, particularly among the poorest and excluded
- Decreased infant and maternal mortality and morbidity
- Enhanced institutional capacity of local bodies to facilitate the execution of Water Supply, Sanitation and Hygiene (WASH) sector/projects and behavioral change process
- Sustainable operation and maintenance of domestic water schemes managed by inclusive Water and Sanitation Users' Committee
- Gender Equality and Social Inclusion (GESI) responsive WASH sector policies, strategies and guidelines at the central and local levels adopted

The project has achieved these outcomes through carrying out activities in major areas of:

- Domestic Water,
- Health, hygiene and sanitation,
- Inclusive local WASH governance and
- Local WASH Policy and guidelines

## **2.7 PROJECT AREA AND PHYSICAL TARGETS**

The RWSSP-WN works in altogether nine district of Nepal. Six of them are located in the hills and three in the southern plains (Terai). Eight of the districts are in the Western Development Region and one in Mid-Western. The Project Support Office with its two wings called the Project Support Unit and Project Coordination Office is located in Pokhara in Western Development Region.

The RWSSP-WN emphasizes the importance of hygiene and sanitation activities in achieving the outcomes and takes hygiene and sanitation as an entry point in the Village Development Committee level. The water schemes are implemented in the Village Development Committees where hygiene and sanitation activities are ignited. In addition to the water supply, sanitation and hygiene activities RWSSP-WN supports arsenic mitigation activities in the three project district located in the Terai.

It is estimated that in water supply 90,000 new people including 10000 arsenic mitigation will benefit from RWSSP-WN support. Likewise 250,000 people will benefit from RWSSP-WN support in sanitation and hygiene. More resources will be channelled to districts with low coverage than to those with higher coverage. A total of

## **2.8 PRESENT SITUATION**

### **2.8.1 WATER SUPPLY AND SANITATION**

National Water Plan (2002-2027) has envisaged attaining 90 percent water coverage and basic sanitation coverage by 2012. The current coverage rates are estimated at 76 percent for improved water supply and 46 percent for basic sanitation; the corresponding rates for

the urban and rural area are 81 percent and 41 percent respectively. With these rates, it appears that Nepal has already achieved millennium development target for drinking water and is approaching the target for basic sanitation (i.e. halving the proportion of people without access to drinking water and sanitation facility in the base year 1990 by the year 2015). However, the situation looks different if the coverage is defined in reference to a minimum travel time to fetch water. Recent studies estimate that by adjusting the stated coverage to 15 minutes collection time, that Nepal needs to serve an additional 7,000 rural households every month between 2000 and 2015 to meet millennium development goal for drinking water (similarly, 10,000 toilets need to be constructed every month in order to meet the sanitation targets).

Several drinking water schemes, particularly the gravity flow systems, are not functioning properly for a variety of reasons including inadequate maintenance, design or construction flaws, natural disaster and water rights disputes. It is estimated that 56 percent of the water schemes require major repairs and 16 percent need complete rehabilitation to restore and assure adequate water supply. Furthermore for those communities that have improved water supplies, many of the schemes are in dire need of rehabilitation because not all users' groups have been able to properly carry out the operation and maintenance responsibilities.

The water supply and sanitation situation in RWSSP-WN project area is the following

**Water supply and sanitation situation in Nepal and in RWSSP-WN project area (2008)**

District	Total No of households	Water Supply				Sanitation	
		No of households with access to WS	Coverage %	No of HHs access to functional WS	Actual % WS coverage	No of households access to sanitation	%
Pyuthan	44,269	35,258	79.64%	20,582	46.49%	8,389	18.95%
Kapilvastu	82,505	66,836	81.01%	66,191	80.23%	16,253	19.70%
Rupandehi	130,202	117,027	89.88%	117,027	89.88%	58,708	45.09%
Nawalparasi	118,545	99,517	83.95%	91,424	77.12%	43,233	36.47%
Baglung	54,638	49,649	90.87%	31,221	57.14%	29,510	54.01%
Tanahu	64,165	52,619	82.01%	38,233	59.59%	33,481	52.18%
Syangja	63,524	49,871	78.51%	36,214	57.01%	41,678	65.61%
Myagdi	23,137	19,274	83.30%	14,694	63.51%	9,303	40.21%
Parbat	32,711	28,765	87.94%	17,558	53.68%	23,424	71.61%
<b>TOTAL for RWSSP-WN area</b>	<b>613,696</b>	<b>518,816</b>	<b>84.54%</b>	<b>433,144</b>	<b>70.58%</b>	<b>263,981</b>	<b>43.01%</b>
Hills	282,444	235,436	83.36%	158,502	56.12%	145,786	51.62%
Terai	331,252	283,380	85.55%	274,642	82.91%	118,195	35.68%

This table shows that water supply coverage in RWSSP-WN area is quite good (as an average of nearly 85 % water supply coverage) but the problem is that 16 % of existing schemes need complete rehabilitation. When the schemes for rehabilitation need are deducted from the coverage the RWSSP-WN water supply coverage decreases to 70 %. Sanitation situation is different. Access to sanitation is only 43 % as an average in the Project districts and in Pyuthan and Kapilvastu districts the access to sanitation is even less than 20 %. The best sanitation situation is reported to be in Parbat district with over 71 % access. The natural conclusion from this table is that hygiene sanitation needs more attention than water.

## 2.8.2 HYGIENE AND SANITATION SECTOR ACTIVITIES EXECUTION PROCESS OF RWSSP-WN

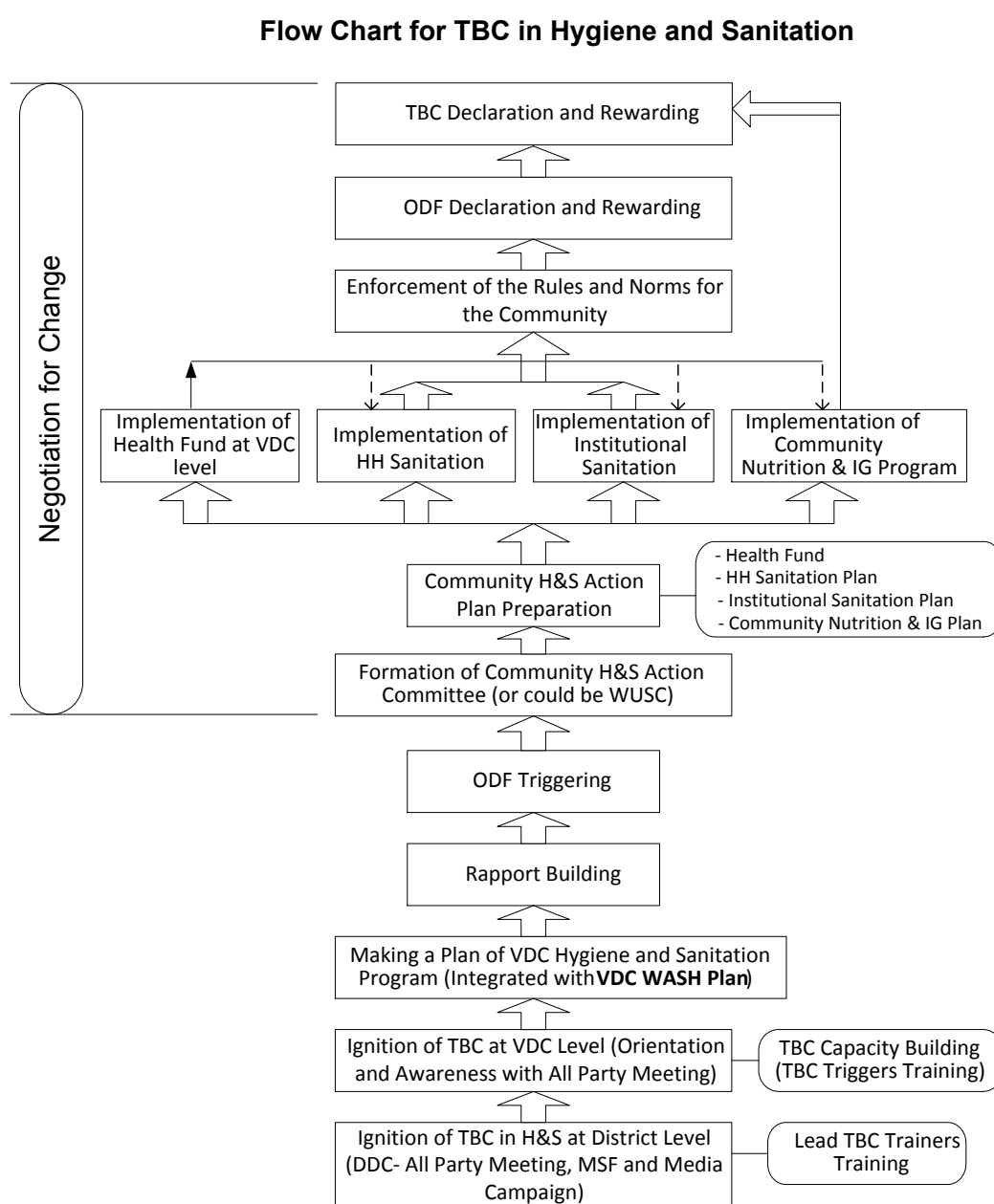
The execution process of the District WASH Implementation Guideline (DWIG) has two streams;

Hygiene & sanitation and domestic water supply as presented in the total flow chart of the DWIG below. However, ultimate goal of these two streams is to achieve Total Behavioural Change (TBC).

## 2.8.3 IMPLEMENTATION OF CLTBCHS

Community Led Total Behavioural Change in Hygiene and Sanitation (CLTBCHS) process flow chart is shown below:

## 2.8.3 TBC FLOW CHART IN HYGIENE AND SANITATION



The process can be executed at three levels:

- Ignition and capacity building at District level,
- Ignition, planning and capacity building at VDC level; and
- Ignition, triggering, capacity building, construction, sustaining and consolidating the achievements at community level.

The first and second phases of ignition are carried out in order to ensure the required resources and political commitment at DDC and VDC levels, whereas the third phase consists of the actual action at the community level, including the triggering activities and ODF declaration.

The community can be a Ward, a Tole, or a Cluster. Especially in Terai VDCs, there is a need to divide the community behavioural change process into small manageable execution units i.e. toles or clusters. In Hill, the community ignition can be done either at Ward or cluster level. It is important to keep in mind that the process shall include ALL households of the selected community.

**Project Period:** The Project period is from August 2008 to July 2012.  
**Project Extension period:** August 2012 to July 2013  
**Project Districts:** The Project has been operational in six Hill and three Terai .

- Baglung, Myagdi and Parbat in Dhawalagiri Zone of Western Development Region;
- Syangja and Tanahun in Gandaki Zone of Western Development Region;
- Pyuthan in Rapti Zone of Mid-Western Development Region
- Kapilvastu, Rupandehi and Nawalparasi in Lumbini Zone of Western Development Region

**The map showing working districts**





#### ***2.8.4 ENTRY POINT***

The entry point or project window at the district level is the Multi Stakeholder Forum (MSF). MSF is a meeting where all district level stakeholders agree the WASH implementation coordination and harmonization and action plan by signing a Memorandum of Understanding. At VDC level the entry point is hygiene and sanitation promotion or ignition. As a result of this VDC, WASH plan is prepared and actions towards universal access in water and sanitation agreed. The VDC WASH plan includes domestic water supply and hygiene, sanitation, nutrition and capacity building interventions.

## CHAPTER 3

### 3. OBJECTIVES AND METHODOLOGY

Rural Water Supply and Sanitation Project in Western Nepal (RWSSP-WN) is a bilateral Project jointly funded –the Governments of Nepal and Finland. The Project period is of five years starting from August 2008 to July 2013 (including one year extension). RWSSP-WN operates in nine (six Hill and three Terai) districts; (*Myagdi, Parbat, Baglung, Syangja, Tanahun, Nawalparasi, Kapilbastu and Rupandehi*) are in Western Development Region and one district (*Pyuthan*) in Mid-Western Development Region.

The Executing Agency of the Project is the Ministry of Federal Affairs and Local Development (MFALD). Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR), together with participating District Development Committees (DDCs) and Village Development Committees (VDCs) implements the Project. The Project has four components (i) Domestic water supply (ii) Hygiene and sanitation (iii) Arsenic mitigation and (iv) WASH governance.

#### Hygiene and Sanitation

The total target population of the hygiene and sanitation is 250,000 of 54 Village Development Committees (VDCs) and 2 wards of the Ramgram municipality of 9 programme districts.

Till 15 November 2012, a total of 45 VDCs out of 54 programme VDCs have declared Open Defecation Free (ODF). The total cumulative number of ODF VDCs in the programme districts has reached 223 VDCs including 178 replicated VDCs.

The net cumulative contribution of the RWSSP-WN's intervention in its program VDCs has yielded 30,012 new toilets. In addition, the net cumulative contribution of the RWSSP-WN intervention in the replicated VDCs has yielded to 83,561 new toilets. Altogether 113,573 households have built new toilets benefiting a population of 671,154 (484,807 in replicated VDCs and 186,347 in program VDCs). In the ODF declared VDCs RWSSP-WN is focusing on the post ODF follow up activities where everyone expects to practice the five key hygienic behaviours as described in the National Sanitation and Hygiene Master Plan. RWSSP-WN is implementing Community Led Total Behaviour Change in Hygiene and Sanitation (CLTBCHS) approach in 54 Village Development Committees (VDCs) of nine programme districts. In this approach, local organizations and people are encouraged and trained to ignite and trigger people at household level to stop open defecation and negotiate further to change their behaviour in five key hygienic behaviours;

- Hand washing with soap or cleaning agent at four critical times,
- Safe disposal and management of faces (promoting also ecological sanitation and organic fertilizer),
- Safe handling, storage and treatment of household drinking water,
- Personal hygiene and
- Proper management of solid and liquid waste in and out of home.

## The Project has four major components

1. Domestic water supply
2. Hygiene and sanitation
3. Arsenic mitigation and
4. WASH governance.

### 3.1 OBJECTIVES OF THE ASSIGNMENT

The objective of the assignment is to assess the impact created through the RWSSP-WN intervention which will be measured by the following indicators.

1. Incidence of diarrhoeal diseases during last 6 years i.e. 2063/64 to 2068/69
2. Child mortality under 5 during last 6 years i.e. 2063/64 to 2068/69

### 3.2 METHODOLOGY

#### 3.2.1 SAMPLING

Total Program VDCs 54 + 2 wards= 56 Subject units

Sampled Districts 9 and sampled VDCs 18

SN	District	Programme VDCs				Replicated VDCs			
		VDC	HH Survey	KII *	FGD**	VDC	HH Survey	KII*	FGD
	<b>Terai</b>								
1	Kapilvastu	Mahendrakot	10	5	1	Banganga	10	5	1
2	Nawalparasi	Dhaubadi	10	5	xx***	Panchanagar	10	5	1
3	Rupendehi	Devdaha	10	5	1	Shankarnagar	10	5	xx
	<b>Hills 1</b>								
4	Myagdi	Dana	10	5	1	Narchyang	10	5	xx
5	Baglung	Bihunkot	10	5	xx	Sigana	10	5	1
6	Parbat	Limithana	10	5	1	Mudikuwa	10	5	xx
	<b>Hills 2</b>								
7	Syanja	Alamadevi	10	5	xx	Birjha	10	5	1
8	Tanahaun	Ghansikuwa	10	5	1	Raipur	10	5	xx
9	Pyuthan	Swargadwarikhal	10	5	xx	Bhingri	10	5	1
<b>Total</b>			<b>90</b>	<b>45</b>	<b>5</b>		<b>90</b>	<b>45</b>	<b>5</b>

\* 1=S/HP In charge; 2= VDC Secretary;3=FCHV; 4= Teachers; 5=Leading Mother (Total 5 from one VDC)

\*\* VWASH Committee members 5-8 in a group

\*\*\* No intervention (no FGD)

Total HH Interview	90x2= 180
Total KII	45x2=90
Total FGD (VWASH Committee)	5x2= 10
Total S/HP records	9x2=18

Selection of Districts and VDCs of Programme and Replicated is convenient and purposive. The number of HH survey is made as quota of 10 purposively with the view of representative of VDC HHs.

### **3. 2.2 INTERVIEW**

The interview was done after taking household (HH) information from the roster of respective VDCs. All the HH number was traced out and then those total numbers of HH was divided by 10 sampled numbers to bring interval. The interval was applied to choose the HH. The selected exact HH were visited. The missed respondents at sampled HH, then second adjoined HH was visited respectively. When the needed number was filled, then the interview was stopped just like quota sampling. The instruments were made in Nepali, pretested, corrected for field implementation and then were translated in English

### **3. 2.3 FGD AND KII**

For the FGD and KII, guidelines were prepared to organise FGD and KII in the field, these were pretested in Pokhara and then minor corrections were made then applied in the field. The guidelines were prepared in Nepali and then translated in English

### **3. 2.4 INSTRUMENTS**

1. Questionnaires for Household Survey (25 pages)
2. Guidelines for Focus Group Discussions (FGDs) (2 Pages)
3. Guidelines for Key Informant Interview (KII) (2 pages)
4. Checklist for S/HP record review ( 1 page) on Child and maternal mortality and Incidence of Diarrhoeal diseases.

### **3. 2.5 Document reviewed .**

- 1 A Model Guideline for District Water Supply, Sanitation and Hygiene
- 2 Annual Report 2012
- 3 Communication and Media Strategy Preparation Guideline
- 4 GoN (2000): Nepal State of sanitation report, Government of Nepal
- 5 Government of Nepal (2010): Sanitation and Hygiene Master Plan, GoN
- 6 Lead TBC Facilitators Training Manual and Resource Book
- 7 Mid-term Report
- 8 MoHP/GoN (2006): Demographic and Health Services Report, MOPH/New Era
- 9 National Sanitation and Hygiene Master Plan
- 10 Project document
- 11 Rural Water Supply and Sanitation Project in Western Nepal (2012): Revised Project Document Draft, (RWSSP-WN), August 2008-July 2012
- 12 RVWRMP (2009): Mid Term Review (MTR) Report of RVWRMP, March 2009
- 13 RWSSP-WN ( 2013): Documents review of RWSSP-WN, Pokhara
- 14 RWSSP-WN (2008): NATIONAL URBAN WATER SUPPLY AND SANITATION SECTOR POLICY, 3<sup>RD</sup> DRAFT V.3, AUGUST 2008
- 15 RWSSP-WN (2009): Master Plan for Sanitation and Hygiene in Nepal, 2009-2017
- 16 RWSSP-WN (2009): Single approach for Planning, Implementation and O&M of Rural WATSAN Program, March 2009
- 17 RWSSP-WN (2009): Strategy and Action Plan for Drinking Water Quality Monitoring in RWSSP-WN, March, 2009

- 18 S/HP/DPHO: Record review
- 19 TBC Triggers Training manual
- 20 Terms of references (2013): RWSSP-WN for the Health Impact Study in Western Nepal, RWSSP-WN, Pokhara

### **3. 2.6 HUMAN RESOURCES**

A total of 6 field surveyors (assistants/enumerators) were hired. They were given orientation on the instruments, methods of data collection (survey, KII, FGD, roster review, data tabulation with formats).

### **3. 2.7 FIELD TEAM COMPOSITION:**

- 1 Consultant =1
- 2 Enumerators-6
- 3 **Team 1** (two persons) went to Myagdi, Baglung and Parbat
- 4 **Team 2** (two persons) went to Nawalparasi, Kapilvastu and Rupendehi
- 5 **Team 3** (two persons) went to Syangja, Tanahaun and Pyuthan

Each team had represented by one male and one female

### **Each groups worked for**

- 1 HH Interview 60x 3 districts=180
- 2 First group 4 FGDs and Second and third did 3/3 each FGDs (a total of 10 FDGs)
- 3 KII 30 in three districts by each (30x3 districts=90 KII)
- 4 Sub/Health post data collection= 18

### **Major tasks of enumerators**

- 1 Collect the data from the health posts/sub-health posts and district public health offices
- 2 Assess the health improvement trends of WASH related diseases and capture the 6 years trends (i.e. from 2063/64 to 2068/69 ) on the above mentioned two indicators
- 3 Do the validation of these data through FGD with VWASHCC members, CHASAC members, TBC triggers, LTBCFs, HPs, Lead mothers, teachers, VDC Secretary, poor and excluded households for incidence of diarrhoeal diseases, child mortality over the last 6 years and overall progress of RWSSP-WN and Data tabulation.

### **3. 2.8 TENTATIVE TIME FRAME**

- 1 February 24, 2013 to April 23, 2013.
- 2 Five days instruments preparations and document review with meeting with RWSSP-WN authorities
- 3 Two days orientation
- 4 Fifteen days field data collection
- 5 Seven days Tabulation
- 6 Remaining days report (draft and final) writing, presentation and final submission.

## CHAPTER 4

### 4. FINDING AND DISCUSSION

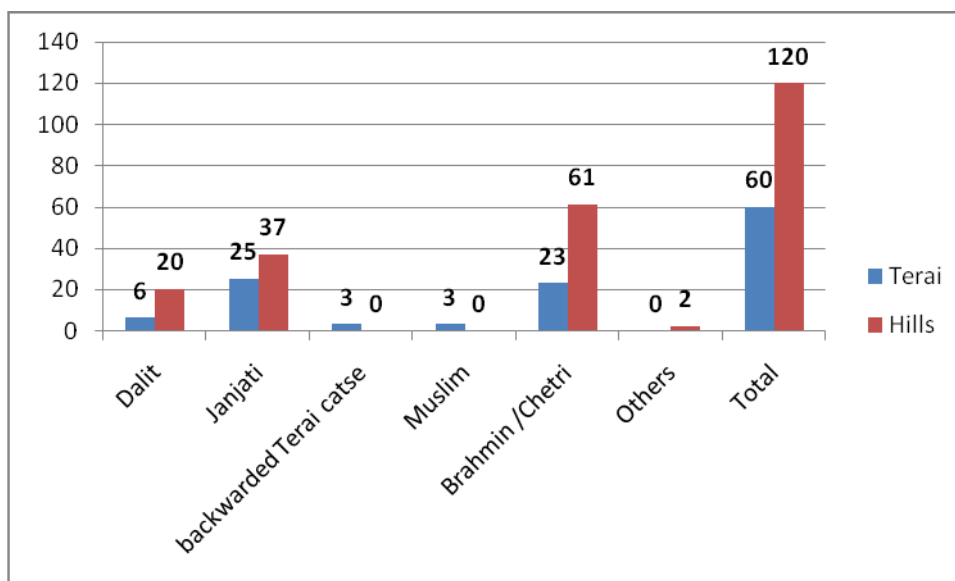
#### 4.1 HOUSEHOLD SURVEY

##### 4.1.1 ETHNICITY OF THE STUDY POPULATION

Each Village Development Committee (VDC) of the Programme and Replicated VDCs had interviewed 10 Head of the Households (HH). Table 1 shows the ethnicity details of the study population.

**Table 1 Ethnicity of the study population**

District	Dalit	Janjati	back warded Terai caste	Muslim	Brahmin /Chetri	Others	Total
Kapilvastu	-	6	2	1	11	-	20
Nawalparasi	2	14	1	1	2	-	20
Rupendehi	4	5	-	1	10	-	20
<b>Total terai*</b>	<b>6</b>	<b>25</b>	<b>3</b>	<b>3</b>	<b>23</b>	<b>-</b>	<b>60</b>
Myagdi	6	12	-	-	2	-	20
Baglung	3	-	-	-	17	-	20
Parbat	4	1	-	-	15	-	20
Syangja	2	5	-	-	13	-	20
Tanahun	1	11	-	-	8	-	20
Pyuthan	4	8	-	-	6	2	20
<b>Total hill*</b>	<b>20</b>	<b>37</b>	<b>-</b>	<b>-</b>	<b>61</b>	<b>2</b>	<b>120</b>
<b>*Both Total</b>	<b>26</b>	<b>62</b>	<b>3</b>	<b>3</b>	<b>84</b>	<b>2</b>	<b>180</b>



Of the total, majority found to be Brahman/Chhetry followed by janajati and least Muslim in Kapilbastu (Terai) district (Table 1). The Muslim was least because of their settlements only in Banganga but not in Mahendrakot VDC. The settlements in Mahendrakot is mainly of hill to terai migrated (*Pahade*) population.

Likewise in Nawalparasi district, of the total, majority found to be Janajati followed by Brahmin/Chhetry and Dalit and least Muslim and backward Terai ethnic group. (Table 1 Nawalparasi). The Muslim and terai backward ethnic groups were least in Nawalparasi (Terai) district because of their settlements only in Panchanagar but not in Dhaubadi VDC. The settlements in Dhaubadi is mainly of hill to terai migrated (*Pahade*) population.

In Rupandehi district, Devdaha and Shankarnagar were sampled as Programme and Replicated VDCs respectively. In both VDCs, majority were of Brahmin/Chhetry followed by Janajati and Dalit. Muslim has the same situation (the least presentation) as of other four VDCs of other two districts (Table:1 Rupandehi). The grand total in three terai districts, there were 30 each HH interview in Programme and Replicated VDCs that is 6 VDCs and 60 respondents.

In the hills, Myagdi district was chosen as sample for the study. Among the sampled HH, there were only three ethnic/caste groups. Of them, majority were of Janajati followed by Dalit and Brahman/Chhetry (Table:1 Myagdi). Being a hill district, Muslim and backward Terai ethnic groups did not found among the sampled HH.

In the hills, another district was Baglung chosen as sample for the study. Among the sampled HH, there were only two ethnic/caste groups. Of them, majority were of Brahmin/Chhetry followed by Dalit (Table:1 Baglung). No Janajati, backward Terai and Muslim found in the sampled HH in the sampled VDCs of Baglung district.

In the Parbat District, Limithana and Mudikuwa VDCs were sampled as Programme and Replicated VDCs where the sampled HH had more of Brahmin/Chhetry followed by Dalit and only one Janajati ethnic group (Table:1 Parbat).

In Syangjha district, Amaladevi as Programme and Birjha as Replicated VDCs were sampled where majority of sampled HH found to be of Brahman/Chhetry followed by Janajati and Dalit groups (Table:1 Syangjha)

The Tanahaun district, majority of sampled HH were of Janajati followed by Brahman/Chhetry and Dalit groups (Table:1 Tanahaun).

In the Pyuthan district, the Dalits are more in Swardwarikhal Programme VDC than Bhingri Replicated VDC, a equal number of Janajati and Brahmin/Chhetry in both VDCs where as 2 were unidentified (others) ethnic groups (Table:1 Pyuthan).

In the hills, a total of 120 respondents were interviewed of whom majority were of Brahman/chhetry (39%) followed by Janajati (32%), Dalit (17%) and others (2%) (Table: total hills)

In both Terai and hills, a total of 180 respondents were interviewed in the sampled HH. Of them, majority were of Brahmin/Chhetry (45%) followed by Janajati (36%), Dalit (14%), Backward terai (3%) and Muslim and others (1% each) (Table:1 Both total). This indicates that the systematic random sampling have covered most of the ethnic group as in the proportion of the ethnic settlements and as of national proportion.



#### 4.1.2 POPULATION DESCRIPTION

**Table: 2 Population by age and sex**

District	VDC	Total Male	Total Female	Below one year male	Below one year female	Under 5 children male	Under 5 children female	15-49 years female
Kapilvastu	Mahendrakot	22	23	4	-	2	3	16
	Badganga	22	17	3	1	4	1	5
Nawalparasi	Dhaubadi	25	27	1	1	4	1	14
	Panchanagar	21	27	3	2	1	2	14
Rupendehi	Debdaha	29	31	-	-	4	1	15
	Shankarnagar	23	27	4	1	4	6	10
<b>Total terai</b>		<b>294</b>		<b>15+</b>	<b>5= 20</b>	<b>19+</b>	<b>14=33</b>	<b>74</b>
Myagdi	Dana	23	29	-	1	1	3	50
	Narchyang	20	29	-	1	1	8	45
Baglung	Bihunkot	32	29	3	-	8	4	64
	Sigana	39	20	2	-	4	-	60
Parbat	Limithana	34	38	1	-	6	3	52
	Mudikuwa	33	37	1	1	8	4	59
Syangja	Alamdebi	52	52	-	-	4	5	14
	Birgha	48	48	-	1	4	4	20
Tanahun	Ghasikuwa	52	48	2	1	2	3	12
	Raipur	48	52	1	1	3	2	4
Pyuthan	Swargadwari	56	53	-	-	5	4	14
	Bhingri	44	47	1	1	6	-	15
<b>Total hill</b>		<b>963</b>		<b>11+</b>	<b>7=18</b>	<b>52+</b>	<b>40=92</b>	<b>409</b>

The family members of the respondents in two VDCs of Kapilbastu district found more female (51%) in Mahendrakot and more male in Banganga (56%) and a total of both, more were male (Table:2 Kapilbastu). The family size in an average in both VDCs is 4.3 persons per family. Sex ratio varies in both VDCs. The average male female ratio is 1.05 (1.05 males for one female).

The family members of the respondents in two VDCs of Nawalparasi district found more males in Programme and Replicated VDCs (54% and 50% respectively) and a total of both, more were male (Table:2 Nawalparasi). The family size in an average in both VDCs is 5.0 persons per family. Sex ratio varies in both VDCs. The average male female ratio is 1.08 (1.08 males for one female).

The family members of the respondents in two VDCs of Rupandehi district found more males in Programme and Replicated VDCs (56% and 53% respectively) and a total of both, more were male (Table:2 Rupandehi). The family size in an average in both VDCs is 5.5 persons per family. Sex ratio varies in both VDCs. The average male female ratio is 1.2 (1.2 males for one female).

In the terai, (three districts and six VDCs and 60 HH), the total population were 294 of whom, more were male 54% and female were 47%. The average family size is 4.9 persons per family and the male female ratio is 1.1 (1.1 males for one female).

In the hills, the family members of the respondents in two VDCs of Myagdi district found more males in Programme and equal percent of both sex in Replicated VDCs (53% and 50% each respectively) and a total of both, more were male (Table:2 Myagdi). The family size in an average in both VDCs is 5.5 persons per family. Sex ratio varies in both VDCs. The average male female ratio is 1.06 (1.06 males for one female).

The family members of the respondents in two VDCs of Baglung district found more females in Programme (53%) and more males (59%) in Replicated VDCs and a total of both, more were male (Table:2 Baglung). The family size in an average in both VDCs is 5.85 persons per family. Sex ratio varies in both VDCs. The average male female ratio is 1.09 (1.09 males for one female).

The family members of the respondents in two VDCs of Parbat district found more males in Programme (51 % each in both VDCs) and equal females (49% each in both VDCs) in Replicated VDCs and a total of both, more were male (Table:2 Parbat). The family size in an average in both VDCs is 7.1 persons per family. The average male female ratio in both VDCs is 1.03 (1.03 males for one female).

In the Syangjiha district, the family members of the respondents in two VDCs found more males in Programme (52 % each in both VDCs) and equal females (48% each in both VDCs) in Replicated VDCs and a total of both, more were male (Table:2 Syangjiha). The family size in an average in both VDCs is 10 persons per family. The average male female ratio in both VDCs is 1.08 (1.08 males for one female). The family size has found bigger (10 persons in an average) and this may be due to the small sample size as well as the sampled HH may have bigger composition of family size (by chance selected HH may have bigger one) than non sampled HH.

In the Tanahaun district, the family members of the respondents in two VDCs found more males in Programme VDC (52 %) and 52% females in Replicated VDC. A total of both, number of male and female (Table:2 Tanahaun). The family size in an average in both VDCs is 10 persons per family. The average male female ratio in both VDCs is 1:1 (one male for one female). The family size has found bigger (10 persons in an average) and this may be due to the small sample size as well as the sampled HH may have bigger

composition of family size (by chance selected HH may have bigger one) than non sampled HH.

The family members of the respondents in two VDCs of Pyuthan district found more males in Programme and Replicated VDCs (56% and 53% respectively) and a total of both, more were male (Table:2 Pyuthan). The family size in an average in both VDCs is 10 persons per family. Sex ratio varies in both VDCs. The average male female ratio is of both VDCs is 1.2 (1.2 males for one female). The family size has found bigger (10 persons in an average) and this may be due to the small sample size as well as the sampled HH may have bigger composition of family size (by chance selected HH may have bigger one) than non sampled HH.

In the total hills (6 districts and 12 VDCs and 120 HH) there were 51 percent of male and 49 percent of female. The average hill family size is 5.5 per family and sex ratio (male female) is 1.04 (1.04 males for 1 female).

In the total terai and hills (9 districts and 18 VDCs and 180 HH) there were 51 percent of male and 49 percent of female. The average total (terai and hill) family size is 5.3 per family and sex ratio (male female) is 1.04 (1.04 males for 1 female).

While comparing terai and hill population male population was 54% in terai and 51% in the hills. More percent of males are in terai than the hills. The female population were 47% in terai and 49% in the hills. The average family size is 4.9 persons per family in terai and 5.5 persons in the hills and the male female ratio is 1.1 in Terai and 1.04 in Hills.

The composition of family type, size and male female ratio has no such big difference.

#### ***4.1.3 DESCRIPTION OF BELOW ONE YEAR CHILDREN***

In Kapilvastu district, out of 20 sampled HH, there were 40% (8 children out of 20 HH) children of below one year aged. Of them, 35% male and 5% female based on sampled HH (Table:2 Kapilbastu). Of the total below one year child population by sex 87.5 percent male child and 12.5 percent girl child

In Nawalparasi district, out of 20 sampled HH, there were 35% (7 children out of 20 HH) children of below one year aged. Of them, 20% male and 15% female based on sampled HH (Table:2 Nawalparasi). Of the total below one year child population by sex 57 percent male child and 43 percent girl child.

In Rupandehi district, out of 20 sampled HH, there were 25% (5 children out of 20 HH) children of below one year aged. Of them, 20% male and 5% female based on sampled HH (Table:2 Rupandehi). Of the total below one year child population by sex 80 percent male child and 20 percent girl child.

In three districts of the terai, out of 60 sampled HH, there were 20 children (33%) of the total sampled HH of below one year aged. Of them, 75% was male and 25% female. The average below one year child per HH in the terai found to be 3 children.

In the hills, Myagdi district has only female below one year child (1 each in Dana and Narchyang VDCs sampled). Only 2 female child at 20 sampled HH found (Table:2 Myagdi). This is only 10% of the total sampled HH.

The Baglung district has only male below one year. Only 5 male child at 20 sampled HH found. This is 25% of the total sampled HH.

The Parbat district has 2 male and 1 female and a total of 3 below one year child. This is 15% of the total 20 sampled HH.

In the Syangjha district, of the total 20 sampled HH, only one (5%) female of below one year child found.

The Tanahaun district, of the total 20 sampled HH, 3 male (15%) and 2 female (10%) (a total of 5 ie 25%) below one year child found.

In the Pyuthan district, the below one year children were only 2 (10%) of the total 20 sampled HH. One each were male and girl.

In all six districts of hill and in 12 VDCs, 11 (61.1%) male and 7 (38.9%) female found at 120 sampled HH. The average HH below one year child per HH found to be 3 children in hill districts.

In all nine districts of both hills and terai and in 18 VDCs, 26 (68.4%) male and 12 (31.6%) female found at 180 sampled HH. The average HH below one year child per HH found to be 3 children in both hills and terai districts.

#### ***4.1.4 DESCRIPTION OF BELOW 5 YEAR CHILDREN***

In Kapilbastu district, out of 20 sampled HH, there were 50% (10 children out of 20 HH) children of below 5 year aged. Of them, 30% male and 20% female based on sampled HH (Table:2 Kapilbastu). Of the total below 5 year child population by sex 60 percent male child and 40 percent girl child.

In Nawalparasi district, out of 20 sampled HH, there were 40% (8 children out of 20 HH) children of below 5 year aged. Of them, 25% male and 15% female based on sampled HH (Table:2 Nawalparasi). Of the total below 5 year child population by sex 62.5 percent male child and 37.5 percent girl child.

In Rupandehi district, out of 20 sampled HH, there were 75% (15 children out of 20 HH) children of below 5 year aged. Of them, 40% male and 35% female based on sampled HH (Table:2 Rupandehi). Of the total below 5 year child population by sex 53.3 percent male child and 46.7 percent girl child.

In total 3 terai districts, out of 60 sampled HH, there were 55% (33 children out of 60 HH) children of below 5 year aged. Of them, 31.7% male and 23.3% female based on sampled HH. Of the total below 5 year child population by sex, 58 percent boy child and 42 percent was girl child.

In Myagdi district, out of 20 sampled HH, there were 65% (13 children out of 20 HH) children of below 5 year aged. Of them, 10% male and 55% female based on sampled HH (Table: 2 Myagdi). Of the total below 5 year child population by sex 15.4 percent male child and 84.6 percent girl child.

In Baglung district, out of 20 sampled HH, there were 80% (16 children out of 20 HH) children of below 5 year aged. Of them, 60% male and 20% female based on sampled HH (Table:2 Baglung). Of the total below 5 year child population by sex, there is 75 percent male child and 25 percent girl child.

In Parbat district, out of 20 sampled HH, there were 105% (21 children out of 20 HH) children of below 5 year aged. Of them, 70% male and 35% female based on sampled HH (Table: 2 Parbat). Of the total below 5 year child population by sex, there is 66.7 percent male child and 33.3 percent girl child.

In Syangjha district, out of 20 sampled HH, there were 85% (17 children out of 20 HH) children of below 5 year aged. Of them, 40% male and 45% female based on sampled HH (Table:2 Syangjha). Of the total below 5 year child population by sex, there is 47 percent male child and 53 percent girl child.

In Tanahaun district, out of 20 sampled HH, there were 50% (10 children out of 20 HH) children of below 5 year aged. Of them, 25% male and 25% female based on sampled HH (Table:2 Tanahaun). Of the total below 5 year child population by sex, there is 50 percent male child and 50 percent girl child.

In Pyuthan district, out of 20 sampled HH, there were 75% (15 children out of 20 HH) children of below 5 year aged. Of them, 55% male and 20% female based on sampled HH (Table:2 Pyuthan). Of the total below 5 year child population by sex, there is 73.3 percent male child and 26.7 percent girl child.

In total hill and terai districts, out of 180 sampled HH, there were 71 (56.8%) male and 54 (43.2%) female (125 children out of 180 HH) children of below 5 year aged.

#### **4.1.5 AGE GROUP OF THE FAMILY MEMBERS AT SAMPLED HH**

The age group by sex in Kapilvastu district of the sampled 20 HH found to be more of female than male between the reproductive age (15-49 years) followed by 6-14 years more males, 1-5 years more males and below one years of age more males. The least were 60 years and above years more male.

The age group by sex in Nawalparasi district of the sampled 20 HH found to be equal of male and female between the reproductive age (15-49 years) followed by 6-14 years more males, 1-5 years more males and below one years of age more males. The least were 50-60 years more males followed by 60 and above years more male.

The age group by sex in Rupandehi district of the sampled 20 HH found to be more males than female between the reproductive age (15-49 years) followed by 6-14 years equal male and female, 1-5 years more males. The least were 60 years and above equal male and female followed by 50-60 years more female.

The age group by sex in three districts of terai of the sampled 60 HH found to be more female than male between the reproductive age (15-49 years) followed by 6-14 years more male than female, 1-5 years more males and. The least were 60 years and above more female followed by 50-60 years more female (Table: 3).

Table: 3 Age group by sex in the terai of the total family members of the sampled HH

			Male (%)	Female (%)	Total (%)
Total Terai 6 VDCs		Below 1 year	14	6	16
		1-5 years	19	15	21
		6-14 years	28	24	35
		15-49 years	83	84	107
		50-60 years	7	10	12
		60 years and +	4	7	

The age group by sex in Myagdi district of the sampled 20 HH found to be more males than female between the reproductive age (15-49 years) followed by 60 and above years more male, 50-60 years more female, 1-5 years more female, 6-14 years more males. The least were below one year's no males.

The age group by sex in Baglung district of the sampled 20 HH found to be more females than male between the reproductive ages (15-49 years) followed by 6-14 more male, 50-60 years more female, 60 and above years more male, 1-5 years more males. The least were below one year's no females.

The age group by sex in Parbat district of the sampled 20 HH found to be more females than male between the reproductive ages (15-49 years) followed by 6-14 more female, 1-5 years more males, 50-60 years more female, 60 and above years more female. The least were below one year's more males.

The age group by sex in Syangha district of the sampled 20 HH found to be more females than male between the reproductive ages (15-49 years) followed by 50-60 more male, 1-5 years more females, 6-14 years more male, 60 and above years more female. The least were below one year's only females.

The age group by sex in Tanahaun district of the sampled 20 HH found to be more females than male between the reproductive ages (15-49 years) followed by 50-60 more female, 6-14 years more female, 1-5 years equal male and female 60 and above years more male. The least were below one year's more males.

The age group by sex in Pyuthan district of the sampled 20 HH found to be more males than male between the reproductive ages (15-49 years) followed by 50-60 more female, 1-5 years more male, 6-14 years more. The least were 60 and above years only one male.

The total hills (6 districts) there were more 15-49 years more females followed by 6-14 more male, 50-60 years more females, 1-5 years more males and 60 and above years more males. The least was of below 1 year child with more male (Table: 4).

Table: 4 Age group by sex in the hills of the total family members of the sampled HH

			Male (%)	Female (%)	Total
Total Hills 12 VDCs		Below 1 year	12	8	20
		1-5 years	42	35	77
			51	45	96
		6-14 years	189	211	400
		15-49 years	39	56	95
		50-60 years	28	23	51
		60 years and +			

The both total hills and terai (9 districts) there were more 15-49 years more females followed by 6-14 more male, 50-60 years more females, 1-5 years more males and 60 and above years more males. The least was of below 1 year child with more male (Table: 5).

Table: 5 Age group by sex in both terai and hills of the total family members of the sampled HH

			Male (%)	Female (%)	Total
Both Total 9 Districts and 18 VDCs		Below 1 year	26	14	14
		1-5 years	61	50	101
			79	69	148
		6-14 years	272	295	567
		15-49 years	46	66	112
		50-60 years	32	30	62
		60 years +			



#### ***4.1.6 HANDICAPPED POPULATION***

No handicapped population found in the sampled HH in Kapilbastu, Nawalparasi, Rupandehi districts of the terai. The hills, Syangja, Tanahaun, and Pyuthan have no handicapped population.

In Myagdi, only in Narchyang, there are 3 handicapped people, all male equal in Baglung (3 person) all males and in Parbat (2 persons) males. A total of 8 persons found to be handicapped in three districts.

#### ***4.1.7 REGISTRATION OF LIFE EVENTS***

The registration of life events in Kapilvastu district found positive. Out of 20 HH, 18 (90%) had birth registration, a 35% death registration and 75% had marriage registration (Table: 6 Kapilbastu). This indicates that the practice of registration is positive. Birth registration is vital for all purpose of entire lives as to enrol in school, citizenship, service and other events of lives.

**Table: 6 Registrations of Life Events**

District	VDC	Birth registration	Death registration	Marriage registration	No any registration
Kapilvastu	Mahendrakot	9	5	5	1
	Badganga	9	2	10	1
Nawalparasi	Dhaubadi	10	-	10	-
	Panchanagar	10	2	10	-
Rupendehi	Debdaha	7	4	10	2
	Shankarnagar	10	4	9	1
<b>Total terai</b>		<b>55</b>	<b>17</b>	<b>54</b>	<b>5</b>
Myagdi	Dana	8	2	7	2
	Narchyang	9	1	8	1
Baglung	Bihunkot	9	2	8	3
	Sigana	4	2	6	4
Parbat	Limithana	9	6	9	1
	Mudikuwa	9	5	10	1
Syangja	Alamdebi	5	-	9	1
	Birgha	7	-	8	2
Tanahun	Ghasikuwa	10	1	10	-
	Raipur	9	-	9	1
Pyuthan	Swargadwari	8	-	10	-
	Bhingri	9	-	10	-
<b>Total hill</b>		<b>96</b>	<b>19</b>	<b>104</b>	<b>16</b>

The registration of life events in Nawalparasi district found positive. Out of 20 HH, 20 (100%) had birth registration, only 2 (10%) death registration and 100% had marriage registration (Table:6 Nawalparasi). This indicates that the practice of registration is positive.

The registration of life events in Rupandehi district found positive. Out of 20 HH, 17 (85%) had birth registration, only 8 (40%) death registration and 95% had marriage registration (Table:6 Rupandehi). This indicates that the practice of registration is positive.

In the terai study districts, 55 (91.7%) out of 60 respondents had birth registration followed by marriage 54 (90%), death 17 (28.3%) and not yet registered 5 (8.3%). This indicates that after implementation of RWSSP-WN Programme, people have understood of the importance of life events registration and now they are in practice.

The registration of life events in the hills, in Myagdi district found positive. Out of 20 HH, 17 (85%) had birth registration, only 3 (15%) death registration and 15 (75%) had marriage registration (Table:6 Myagdi). This indicates that the practice of registration is positive.

The registration of life events in the hills, in Baglung district found positive. Out of 20 HH, 13 (65%) had birth registration, only 4 (20%) death registration, 14 (70%) had marriage registration and 7 (35%) had no any registration (Table:6 Baglung). This indicates that the practice of registration in this district found to be moderate.

In the Parbat district out of 20 HH, 18 (90%) had birth registration, only 11 (55%) death registration, 19 (95%) had marriage registration and 2 (10%) had no any registration (Table:6 Parbat). This indicates that the practice of registration in this district found to be good.

In the Syangjha district out of 20 HH, 12 (60%) had birth registration, no any death registration, 17 (85%) had marriage registration and 3 (15%) had no any registration (Table:6 Syangjha). This indicates that the practice of registration in this district found to be moderate.

In the Tanahaun district out of 20 HH, 19 (95%) had birth registration, only one (5%) had death registration, 19 (95%) had marriage registration and 1 (5%) had no any registration (Table:6 Tanahaun). This indicates that the practice of registration in this district found to be good.

In the Pyuthan district out of 20 HH, 17 (85%) had birth registration, no any death registration, and 20 (100%) had marriage registration (Table:6 Pyuthan). This indicates that the practice of registration in this district found to be excellent.

In 6 districts of the hills, 120 HH had interviewed and a total of 96 (80.8%) had birth registration, 19 (15.8%) had death registration, 104 (86.7%) had marriage registration and 16 (13.3%) had no any registration. This indicates that the life events registration practice in the hills found to be satisfactory. This practice was upgraded after implementation of RWSSP-WN Programme.

In 9 districts of the hills and terai, 180 HH had interviewed and a total of 151 (83.9%) had birth registration, 36 (20%) had death registration, 158 (87.8%) had marriage registration and 21 (11.7%) had no any registration. This indicates that the life events registration practice in the hills and terai in both Programme and Replicated VDCs found to be satisfactory. This practice was upgraded after implementation of RWSSP-WN Programme.

### Educational status of the family of the sampled HH

The educational status in the Programme and Replicated VDCs of the sampled HH (n=180) and their family (n=881 members excluding below 5 years children) found to be high percent of literate (81.8% including SLC, IA, BA and above where as 18.2% were illiterate. There is no vast difference between male and female's educational status (Table:7).

The families were encouraged by RWSSP-WN for the education and enrolment rate in school has been raised if we compare the date of before RWSSP-WN entry.

Table: 7 Educational Statuses

District	VDC	Education	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
			<i>M F T</i>	<i>M F T</i>	<i>M F T</i>
9	18	Illiterate	29 39 68	41 51 92	70 90 160
		Literate	88 88 178	102 101 203	190 189 381
		SLC	46 52 98	43 37 80	89 89 178
		IA (+2)	43 23 66	31 17 48	74 40 114
		BA and above	17 8 25	15 7 23	32 15 48

### 4.1.8 INCOME SOURCES OF THE SAMPLED HH FAMILIES

The income sources have been duplicated (more than one income sources of a family). The major income source is from agriculture followed by services, labouring and business (Table: 8).

Table: 8 Income sources/occupation of the family

District	VDC	Income source/Occupation	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Agriculture	62	54	116
		Business	23	19	42
		Labouring	21	27	48
		Services	30	26	56

#### **4.1.9 FOOD SUFFICIENCY**

The availability of food for a year found to be good. Some have sufficient for a year and also selling. Very few families have less than 3 months, 3-6 months and 6-9 months sufficiency (Table: 9). The duration which is not sufficient by food are managed by labouring within and outside country. Seasonal labour migration is the alternative to fulfil the scarcity of foods and daily usages. These patterns have helped to reduce the malnutrition. They have irrigation, canals and water supply for drinking and kitchen garden. The achievement of the food sufficiency is due to good production where RWSSP-WN is providing drinking water and advocacy about food sources.

Table: 9 Food sufficiency statuses

District	VDC	Sufficient for	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Less than 3 months	2	1	3
		3-6 months	11	7	18
		6-9 months	19	14	33
		9-12 months	60	50	110
		Sufficient and selling too	7	7	14

#### **4.1.10 MEMBERSHIP IN DIFFERENT ORGANISATIONS**

The respondents were enquired about whether they are the members of any organisations (like DWASH CC, VWASH CC and other organisations). Majority of the respondents found to be no member in any organisation. Out of 180 respondents, only 22 male and 15 female (a total of 37) are the members of organisations (Table:10).

Table 10: Memberships in different organisations related to drinking water and sanitation

District	VDC	Membership	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Yes: Male	16	8	22
		Female	9	6	15
		No	64	79	143
					180

#### 4.1.11 KNOWLEDGE ON SOME STATEMENTS

Some of the social, gender, cultural related statements were asked to judge by the respondents. Of the total 180 respondents, only 80 agreed to give their opinion on the statements.

The respondents who opined against statements found knowledgeable on social system, gender equality and cultural practices. More than 96 percent of respondents opined that not only women must do household works; it is the responsibility of man and woman. Likewise 95% opined that not only male must do outside home works; it is also the responsibility of both. More than 97% respondents viewed that not only women must care children but also by all members of the family. All (100%) do not agree on the statement of "No women are allowed to be the member of Consumer's Forum", they have right to be the members of any organisations. More than 92% respondents were not agreeing with the statement of "No women are allowed to work as labourer." "Only sons have property right" statement was denied by more than 96% respondents, it should go also to daughters. The cent percent of the respondents denied the statement as "Only son is allowed to go to school" (Table:11).

The opinions indicate that the respondents are knowledgeable on social, gender and cultural equity, justice, and practices. Humanity, human right and equal opportunities are well set up after RWSSP-WN Programme implementation which had a gap before the Programme in the VDCs.

Table: 11 Opinion on statements

District	VDC	Statements	Right (n)	Wrong (n)	Don't know (n)	Total
9	18	1. Only women must do household work	3	77	-	80
		2. Only male must do outside home works	4	76	-	80
		3. Only women must care children	2	78	-	80
		4. No women are allowed to be the member of Consumer's Forum	-	80	-	80
		5. No women are allowed to work as labourer	6	74	-	80
		6. Only son have property right	3	77	-	80
		7. Only son is allowed to go				

		to school	-	80	-	80
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#### **4.1.12 KNOWLEDGE AND PRACTICE ON HYGIENE AND SANITATION**

The respondents had asked whether they use toilet or not. Of the total 180 HH, 180 (100%) have been using toilets after RWSSP-WN Programme implementation (Table: 12). They had not used toilet before the programme due to open defecation practice. The campaigning on toilet construction by RWSSP-WN, people started to construct toilet with the assistance of programme. And thus, today no households are without toilets. This is a great success of the programme.

Table 12: Number of toilets in the sampled HH

District	VDC	Use of toilet	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Yes	90	90	180
		No	-	-	-
			90	90	180

#### **4.1.13 DEFECATION PLACES BEFORE RWSSP-WN PROGRAMME**

The defecation places of the toilet before RWSSP-WN programme was open places such as jungle, baron land, bank of river, road side and any where etc (Table: 13). As reported by the respondents, more than 135 (75%) HH (of the interviewed HH) had no toilet before RWSSP-WN entry in the districts. But now, each HH have their toilet of any type. This is the success of the programme.

Table 13: Defecation practice before programme implementation

District	VDC	Toilet places	<i>PROGRAMME(p)</i>	<i>REPLICATED(R)</i>	<i>Total</i>
9	18	Jungle/forest	10	12	22
		River	12	8	20
		Open places	9	9	18
		Kitchen garden	7	5	12
		Road side	12	8	20

		Dam	5	4	9
		Anywhere	20	14	34
		Others			
			75	60	135

#### **4.1.14 FORMS/TYPES OF TOILET**

The 180 HH had toilets and the forms found common for family members of 149 (82.8%) HH followed by attached 16 (8.9%), community 15 (8.3%) and no one found to use pots (*Chutuwa*). Of the total (180) toilets, 140 (77.8%) was slab/pitched and 40 (22.2%) non slab/non pitched (Table: 14). This indicates better position and quality of toilets. The hygiene of toilets were observed and found clean and non smell, soaps and water for hand washing after defecation was available.

Table: 14 If yes, Forms of toilet in use

District	VDC	Forms of toilet	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Personal (attached)	8	8	16
		Community	7	8	15
		Common of Family	75	74	149
		Pot	-	-	-
		-----	-----	-----	-----
		Slab/Pitched	80	60	140
		Non slab/non Pitched	10	30	40

#### **4.1.15 REASONS FOR TOILET USE**

There were multiple reasons they replied. Persons replying in health reason also replied easiness, good hygiene, social pressure and other reasons (as self known, learnt after consultation with WASH committee, seeing other's examples, etc). Thus, multiple responses have been found.



Maximum (161 responses) said the purpose of toilet use was due to the health reasons followed by for good hygiene (152 responses), for easiness (128 responses) and social pressure and other reasons (Table: 15).

Table 15: Reasons for toilet use

District	VDC	Reasons	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Health reason	88	73	161
		For easiness	57	71	128
		For good hygiene	92	60	152
		Due to social pressure	1	5	6
		Others	19	25	44

#### **4.1.16 SAFETY PRACTICE OF TOILET**

The respondents were asked about how they manage if safety tank is full. Majority of them 158 (87.8%) reported that they make vacuum and throw the faces in a ground hole and cover by soil. Leave as it is (do not do anything) represent a very small percentage (1.1%) and remaining 20 (11.1%) make new toilet (Table:16).

Table: 16 Management of (Safety) toilet (if is full)

District	VDC	Safety way for full tank	<i>PROGRAMME</i>	<i>REPLICATED)</i>	<i>Total</i>
9	18	Do not do anything	1	1	2
		Make another new	2	18	20
		Make vacuum	87	71	158
		Others			
			90	90	180

#### **4.1.17 TOILET USE PATTERN**

The toilets at home were used by all members. No persons had been restricted to use all forms of toilets (Table: 17).

Table: 17 Use of toilet by family members

District	VDC	Toilet use	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Use by all members	90	90	180
		Do not use			
		Children only			

#### **4.1.18 REASONS BEHIND NOT CONSTRUCTING TOILETS BEFORE RWSSP-WN**

The reasons behind not constructing toilets before the RWSSP-WN programme ( of the 135 HH) were feeling no benefit, followed by expensive, no knowledge and do not feel necessary lack (Table:18). They had given special attention for the construction of toilet and its use by the RWSSP-WN.

Table: 18 Reasons for not making toilet before RWSSP-WN programme

District	VDC	Reasons	<i>PROGRAMME</i>	<i>REPLICATED</i>	Total
9	18	Don't feel necessary	10	9	19
		No knowledge	20	5	25
		No benefit	35	15	50
		Expensive	23	18	41
		No material available	-	-	
		No land	-	-	
		No family practice	-	-	
		Others			

#### **4.1.19 MANAGEMENT OF CHILD FACES**

The management of children's faces was asked to the respondents. There were multiple responses. Sometime they throw in toilet, sometime cover by soil and the like. Most of the children's faces are thrown in the toilet, followed by covered by soil, leave as it is throw to field and feed to animal (pig, dog, birds etc) (Table: 19). Thus, there is a need of hygiene and sanitation education about the management of children's faces to control the health problems and to promote BCC.

Table: 19 Management of child faces

District	VDC	Management	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Throw in toilet	59	47	106
		Cover by dust/soil	25	21	46
		Feed to animal	-	6	6
		Leave as it is	-	14	14
		Other (throw to field)	6	2	8
			90	90	180

#### **4.1.20 MANAGEMENT OF HYGIENE OF WATER CONTAINED POTS**

The management of hygiene of water containers was good. Almost all (97.8%) except 4 out of 180 wash the containers before fetching water (Table: 20).

Table 20: Hygiene of water

District	VDC	Management of water pot	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Wash before fetch	90	86	
		Do not wash	-	4	
			90	90	180

#### **4.1.21 MEANS OF WASHING OF THE WATER CONTAINERS**

There have been multiple answers. Sometimes they wash water containers with soap, sometimes water only and so on. The Majority wash containers with soap followed by ash, water only, steel wires (*jush*), leaves, straw, soil, paddy particles etc (Table:21). They need education on the hygiene of water containers and means of washing (preferably soap and steel wires).

Table: 21 Means of washing containers

District	VDC	Means of washing	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Water only	28	18	
		Soil use	7	2	
		Ash	32	35	
		Soap	73	58	
		Straw	4	6	
		Paddy particles	2	5	
		Leaf	6	5	
		Steel Jhush	8	9	
		Other	3	1	

#### **4.1.22 HAND WASHING PRACTICE**

There are multiple answers with duplication on hand washing practices. Hand washing practices found to be universal and scientific. Almost all (96.7%) has the hand washing practice after defecation, followed by after eating food, after wash of child anus after defecation, before child feeding and self eating, before food sharing and any time/always before any events (Table:22). This practice has reduced the child morbidity and mortality; keep good personal hygiene of all family members and living healthy lives. This is the outcomes of RWSSP-WN Programme.

Table: 22 Hand washing practice

District	VDC	Hand washing time	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	After defecation	95	79	174
		Before cooking	41	45	86
		After eating food	50	58	108
		After child Defecation	49	49	98
		Before child feeding	39	29	68
		Before food share	12	13	25
		Any time/always before any event	11	12	23

#### **4.1.23 MEANS OF HAND WASHING**

The hand washing practice was found good. The means of washing hands by soap is higher than the other means. Likewise they wash hands with water only depending upon the tasks they have performed. Soil, ash and straw have used by very minimal persons (Table:23).

Table: 23 Means of hand washing

District	VDC	Means of washing	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Water only	6	5	11
		Soil use	-	2	2
		Ash	-	9	9
		Soap	83	73	156
		Straw	1	1	2
		Paddy particles	-	-	-
		Other	-	-	-

#### **4.1.24 USED WATER MANAGEMENT**

The respondents have asked about the use of used water. Majority (65.6%) throw used water in kitchen garden for useful usages. The remaining throw the used water in sewage, throw anywhere and in flower pot (Table: 24)

Table 24: Management of used water

District	VDC	Management of used water	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Throw in kitchen garden	51	67	
		Mix in Sewage	5	4	
		Keep with cover	1	-	
		Throw anywhere	29	14	
		Others (Flower pot)	4	5	
			90	90	180

#### **4.1.25 MANAGEMENT OF MANURE**

The respondents have managed the animal excreta and left grass at the holes for the purpose of storage, keep in cow shed, compound, throw anywhere and keep in farm yard (Table:25). Thus, no animal excreta are kept open nearby the door of the house.

Table 25: Management of manure (animal excreta)

District	VDC	Management of animal excreta	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Keeping in holes	33	35	
		Keep in cow shed	34	19	
		Keep in compound	3	4	
		Throw anywhere	2	-	
		Others (farm yard)	18	32	
			90	90	180

#### 4.1.26 PLACES OF ANIMAL SHED

The animals have been kept in the cowshed outside the house (92.8%), only 5 are kept inside the house. The animals inside the house are dog and chicken, goat and pig (Table: 27). Some cows/ox (8 in number) are given to other person to care their animals (Table: 26). Thus, for the sake of health prevention, the animals are kept separate of home. It is due to the counselling and advocacy given by RWSSP-WN to the people in Programme and Replicated areas.

Table 26: Animal shed

District	VDC	Management of animal shed	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Inside house	-	5	
		Cow shed outside home	90	77	
		Open yard	-	-	
		Others (given to others)	-	8	
			90	90	180

Table: 27: Animals inside house

District	VDC	Animal inside home	<i>PROGRAMME</i>	<i>REPLICATED</i>
9	18	Cow/buffalo/ox	-	1
		Dog	12	16
		Chicken	25	23
		Pig	3	-
		Goat	12	1
		Others (pigeon)	-	13

#### **4.1.27 KITCHEN TYPE**

Majority of kitchen were made by mud (92 HH out of 180 a 51%) with local technology of its traditional types. The chimney was adjusted in some of the kitchen even in the traditional kitchen. Smokeless stove/kitchen was also set up in 60 houses (33.3%), some were brick made and open hole outside house (Table: 28). Thus, most of the kitchen types are made keeping health as a major concern which was made after RWSSP-WN Programme implementation.

Table 28: Health related: Types of kitchen oven

SN	District	VDC	Kitchen oven	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
1	9	18	Made by mud	52	40	92
			Smokeless	29	31	60
			Made by brick	5	15	20
			Open hole	4	3	7
			Others	-	1	1
				90	90	180

#### **4.1.28 IMMUNIZATION AND DE-WORMING STATUS AMONG CHILDREN IN SAMPLED HOUSEHOLDS**

The below one year children were 59 in all sampled VDCs (Table: 3) and 225 children were of below 5 years age (Table: 4). Thus, a total of children were 284. When the HH respondents asked about the immunisation and de-worming tablets to their children, there was recall bias. The male respondents did not have knowledge whether their children were immunised.

Of the 113 responses, 97 had fed de-worming tablets and 16 did not. Likewise, those who had fed de-worming tablets almost all had immunised BCG, DPT, Polio and meseals (Table: 29). Thus, the children's immunisation status is good due to national Programme of the government and RWSSP-WN participation.



Table 29: Immunisation and De-worming activities

District	VDC	Deworming & Immunisation	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Fed tablet	55	42	97
		Not yet	11	5	16
		Immunised BCG	49	41	90
		DPT	51	41	92
		Polio	46	46	92
		Meseals	44	37	91

#### 4.1.29 MORTALITY AND MORBIDITY OF CHILDREN AND MOTHERS

There was no single case of death (mortality) of the children and mothers. The morbidity of the children reported as of 163 children out of 284 (57.4%) (Table; 3,4 and 30) who were sick within one year. The types of sickness were fever, ARI, diarrhoea, common cold. Likewise, 169 mothers of the 180 HH, (one HH have more than one women) were sick (Table 30). The sickness types were fever, body pain, UTI, menstruation inconsistency, etc.

Table: 30 Mortality and morbidity of children and mothers

District	VDC	Mortality & Morbidity within 1 year	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Child >5 years mortality	-	-	-
		Child >5 years morbidity	94	69	163
		Pregnant/delivered women mortality	-	-	-
		Pregnant/delivered women morbidity	94	75	169

#### **4.1.30 CHILD GROWTH MONITORING PRACTICE**

There was regular growths monitoring practices of 62 HH and 54 did not (Table:31). The 64 HH have no knowledge about when they have taken growth monitoring. It was due to male respondents who do not know when their wives took them at ORC centre. Growth monitoring might have done but due to the ignorance of males (husband) the information has been missed.

Of the total 62 growth monitored children 42 (67.7%) children have moderate weight followed by 14 (22.6%) low weight and 6 (9.7%) over weight (Table: 31). The low weight percent is lower than national data of malnutrition (@40% children are malnourished in Nepal-data varies).

Table: 31 Child growths monitoring practice

District	VDC	Growth monitoring	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Regular weight taken	30	32	62
		Not yet	37	17	54
		<b><u>If yes</u></b>			
		Found low weight	9	5	14
		Moderate	30	12	42
		More weight	6	-	6

#### **4.1.31 KNOWLEDGE ON VITAMIN, PROTEIN, MINERALS AND CARBOHYDRATE AND FEEDING**

Out of 180 HH, only 161 HH replied about feeding frequencies. Of them 132 (82%) have knowledge on the feeding importance, frequency and practice, vitamins, protein, minerals and carbohydrate (Table: 32). At least two times feeding practice has of 85 families followed by three times and four times (Table: 32). The Tiffin at school are managed by themselves (113 HH) and 4 children have been receiving by some projects (name unknown). This indicates that only two times child feeding (except breast feeding) is not

satisfactory. Thus, there is the need of food education and its relation with child growth and nutrition.

Table 32 Knowledge on Vitamin, Protein, Minerals and Carbohydrate and feeding frequency

District	VDC	Knowledge and feeding frequencies	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Yes	73	59	132
		No	15	14	29
		<b><u>Feeding time a day</u></b>			
		One	-	-	-
		Two	56	29	85
		Three	30	39	69
		Four	4	3	7
		More than four	-	-	-
		<b><u>Tiffin to child at school</u></b>			
		Yes	61	52	113
		No	18	13	31
		<b><u>If yes, who gives</u></b>			
		Self manage	57	52	109
		School provides	-	-	-
		Projects provide	-	-	-
		.....	4		4
		.....			
		Others			

#### 4.1.32 PREGNANCY CARE

Out of 180 HH, 118 (65.5%) have the practice of taking regular weight during pregnancy. Of them, 143 have taken TT injection and 129 took iron tablets from the health service outlets. The ANC checkups for four times are more than one, two and three times. More families have planned for institutional delivery rather than home assisted by family, at home assisted by trained midwives (Table: 33). This indicates that women are empowered on the decision making during and after pregnancy and delivery, aware on the use of health service outlets, child care, and for medication and treatment. The trend has been raised after the RWSSP=WN programme implementation.

Table: 33 Pregnancy care

District	VDC	Pregnancy care	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Regular weight	57	61	118
		TT Injection	75	68	143
		Iron tablet use	64	65	129
		<b><u>ANC Checkups</u></b>			
		One time	1	-	1
		Two times	2	4	6
		Three times	10	10	20
		Four times	45	40	85
		More than four times	9	10	19
		<b><u>Delivery place plan</u></b>			
		At home (support by family)	12	17	29
		At home (Support by trained midwives)	16	19	35

		Health Institution	43	42	85
		No any plan made	1	-	1
		Other	-	2	2

#### **4.1.33 SOURCES OF DRINKING WATER**

The sources of drinking water vary in different ecological zones. But, the RWSSP-WN has initiated to provide drinking water in different districts and VDCs. But, these schemes may not be feasible to each and every household. The availability of water source is pipe (83.3%) followed by tube well, well, fenced well (*Inar*) and few others (Table: 34). No persons found waterless in the RWSSP-WN programme and replicated VDCs. Some places have common taps, some private and some well and tube well for certain families installed in places that not more than 15 minutes walk needed for a common water source.

Table: 34 Sources of drinking water

District	VDC	Sources of Water	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	Pipe	81	69	150
		Well	4	7	11
		Tube well	9	4	13
		River	-	1	1
		Main source	-	2	2
		Fenced well ( <i>Inar</i> )	1	1	2
		Pond	-	-	-
		Rain water	-	-	-
		Others	-	1	1

#### 4.1.34 QUALITY OF WATER

In the sampled HH, the water sources were available. The quality found to be clean (90%) and the remaining 10% of water some found dirty, iron contained, and lime mixed (Table: 35). If people are aware on filtration and purification processes of available water, these problems will be sorted out.

Table: 35 Quality of water

District	VDC	Quality of water	PROGRAMME	REPLICATED	Total
9	18	Clean	84	78	162
		Seem dirty	4	4	8
		Iron contained	1	-	1
		Arsenic contained	1	-	1
		Lime mixed	-	8	8
		Sulphur mixed	-	-	-
		Others	-	-	-

#### 4.1.35 TUBE WELL INFORMATION

In the terai districts, 24 (40%) of the total 60 sampled HH have tube well and other have other sources of drinking water such as tap, *Inar*, well, etc. All tube well was installed within one year (Table: 36). Few were installed by self and other by projects (name unknown to them) (this may be RWSSP-WN).

Table: 36 Information on Tube well

District	VDC	Tube well installation	PROGRAMME	REPLICATED	Total
3	6	Yes	17	7	24
		No	23	13	36
		<b><u>If yes</u></b> Installed year	12	12	24

		Less than one year	-		
		More than two years	-		
		<b><u>Depth</u></b>			
		.....Feet			NA
		.....Feet			
		<b><u>Who helped</u></b>			
		Self	2	2	4
		Other projects such as.(Unknown source)	12	8	20
		Water capacity once handled			NA
		Litre			

#### **4.1.36 WATER QUALITIES IN THE TERAI**

This is not available, no one explained about the time and volume (Table 37).

37 Water qualities in Terai (Arsenic status)

District	VDC	Arsenic status	PROGRAMME	REPLICATED	Total
3	6	Tested			NA
		<b><u>When tested</u></b>			NA
		Less than one year			
		More than two years			
		<b><u>Volume</u></b>			NA
		.....			
		.....			

		..... Arsenic Filter (if have more than 50 ppb)			
--	--	--	--	--	--

#### **4.1.37 ARSENIC PROBLEMS**

In the teari sampled HH, only 51 HH out of 60 have Tube well. In the tube well installed HH, 3 had arsenic problem (Table: 38) and they were eradicated with the help of RWSSP-WN.

Table: 38 Arsenic problems

District	VDC	Arsenic Problem	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
3	6	Yes	1	2	3
		No	40	8	48

#### **4.1.38 TIME AND FREQUENCY TO BRING WATER**

The time and frequency in a day to bring water were asked to the respondent. They reported that less than 15 minutes 157 HH (88.2%) and 23 (12.8%) more than 15 minutes (Table: 39). The time they spent for water pottering is under international standard (less than 15 minutes walk). It is due to the RWSSP-WN assistance by installation of pipe and tube well in the working VDCs. Likewise, they mostly bring water twice a day followed by three times a day and four times a day and more than four times a day (Table: 39). Most of them have one water sources followed by two and more than two.

Table: 39 Sources and consumption of water

District	VDC	Water source devises	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	<b><u>Time to bring water</u></b>			
		Less than 15 minutes	77	80	157
		More than 15 Min	13	10	23
		<b><u>Times to bring in a day</u></b>			



		One time	5	9	14
		Two times	32	28	60
		Three times	20	23	43
		Four times	10	11	21
		More than four times	33	9	42
		<b><u>Number of water sources</u></b>			106
		Only one	59	47	65
		Two	24	41	9
		More than two	7	2	

#### **4.1.39 PERSONAL HYGIENE**

The respondents were asked about their hygiene management. The bathing frequency found to be more on once a week 69 (38.3%) followed by two days interval 65 (36.1%), once a day 41 (22.8) and few on once a month and seldom (Table: 40). The bathing frequency indicates that they have good practice and they know about maintaining of good hygiene. The washing of cloth frequency also is similar with bathing frequency. The means of washing and bathing are soap and water followed by water only. Nail cutting practice is more on seldom followed by regular.

Table: 40 Personal Hygiene

District	VDC	Hygiene	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
9	18	<b><u>Bathing</u></b>			
		Once a day	29	12	41
		Two days interval	32	33	65

		Once a week	27	42	69
		Once in 15 days	1	-	1
		Once a month	1	1	2
		Seldom	-	2	2
		<b><u>Washing clothes</u></b>			
		Once a day	24	15	39
		Two days interval	24	25	49
		Once a week	43	36	79
		Once in 15 days	2	1	3
		Once a month	3	-	3
		Seldom	4	4	8
		<b><u>Means of bathing materials</u></b>			2
		Rittha	-	2	2
		Soap	97	77	174
		Only water	3	1	4
		<b><u>Nail cutting</u></b>			
		Regular	36	38	74
		Seldom	63	42	105
		Biting	1	-	1

#### 4.1.40 KNOWLEDGE ON PREVENTION OF DIARRHOEA

The responses were more than one on the knowledge on the reasons and prevention from diarrhoea, and feeding during diarrhoea. The respondents have sufficient knowledge about the reasons and prevention from diarrhoea. Out of 180 respondents, 155 responses (more than 86%) said the reasons for diarrhoea is by eating dirty foods, followed by contaminated water 135 ((75%), eating passed days foods 123 (more than 68%), playing in dirty places, dirty body and eating whatever available (Table: 41).

Likewise the knowledge on feeding during diarrhoea (as a prevention and control of loose motion) found to be liquid reported by 150 (83.3%), followed by ORS 149 (82.8%), take to hospital, breast milk, medicine and feeding only water (Table: 41).

The RWSSP-WN seems to be successful to prevent and control diarrhoea in both programme and replicated districts and VDCs. The significant number of respondents have proper knowledge on reasons and feeding practices on diarrhoea of the children. The advocacy, service, counselling, programme and communication found to be good methods for imparting the preventive and practice level activities.

Table: 41 Diarrhoea related information: Reasons and preventives of Diarrhoea

District	VDC	Reason of Diarrhoea	PROGRAMME	REPLICATED	Total
9	18	Playing in dirty place	57	33	90
		Eating dirt	88	67	155
		Eating passed days food	75	48	123
		Dirty body	25	27	52
		Contaminated water	75	60	135
		Eating whatever avails	15	19	34
		<b><u>What provides during Diarrhoea</u></b>			
		Liquid	91	59	150
		Breast milk	32	20	52
		Only water	7	14	21

		ORS (Jeevan Jal)	84	65	149
		Medicine	23	17	40
		Take to hospital	50	28	78
		Nothing given			

#### **4.1.41 OPEN DEFECATION FREE (ODF) AND POSSIBLE HEALTH ISSUES**

Some of the respondents were confused about ODF concepts. When the concepts were explained by the enumerators, then all said that their VDCs are ODF VDCs. Of them, 150 (83%) said that ODF was declared within this year (2011-2012) and remaining was declared ODF two years back (Table: 42).

This is very high degree of success of RWSSP-WN that all VDCs are declared ODF and it has directly and indirectly reducing diarrhoea, morbidity and mortality of the family members especially children

Table 42: Information on Open Defecation Free (ODF) and possible health issues

District	VDC	Health issues	<i>PROGRAMME</i>	<i>REPLICATED</i>	<i>Total</i>
Total 9	Program (9 VDCs)	Is this VDC ODF?			
		Yes	90	90	180
		No	-	-	-
		<b><u>If yes since when?</u></b>			
		Within this year	70	80	150
		Two years back	20	10	30
		Other years .....			

#### 4.1.42 CHILD HEALTH PROBLEMS ON PRE AND POST OF ODF

The respondents reported the child health situation during pre and post ODF period. Of the total 180 respondents, 155 (86%) participated in the interview. Other denied to participate due to their personal busy schedule. Among the respondents, every person gave their opinion in each topic as before ODF their children had more frequent diarrhoea which was significantly reduced after some periods of ODF declaration. Likewise, they had wasted children before ODF declaration which has been reduced significantly. There were many malnourished (all sorts of malnourishment) children before ODF and has reduced after some periods of ODF declaration. The high ARI, loss of appetite, expense on treatment, in capability to play of their children before ODF have significantly changed as the children were less sick, eating good volume of food, reduction on treatment costs, well play and smiling after some periods of ODF declaration (Table:43). The BCC on the use of toilet, making toilet clean, hand washing practices, keeping personal hygiene good condition, child rare and care, breast feeding practices, use of ORS and liquids during diarrhoea, timely treatment of the ARI cases, provision of nutritious foods, fresh diets, frequency of diet to the children and other behaviours and practices have played significant role to make child healthy (mental, physical, social, cultural, etc). These situation was in progress due to the overall education, assistance for toilet construction, BCC messages, communication, door to door visit and counselling, health education and promotion of IEC materials by RWSSP-WN while implementing WASH programme activities. Thus, the programme has a big success and has changed socio, economic, cultural, health and WASH related situation in between five years periods.

Table: 43 Child health problems at pre and post of ODF

No	Health issues in pre ODF	<i>PROG</i>	<i>REPLI</i>	<i>Tot</i>	Health issues in Post ODF	Prog	Repl	Tot
9 Dists 18 VDCs	<b><u>Pre ODF, the child had</u></b>				<b><u>Post ODF, improvement in</u></b>			
	More frequent diarrhoea	88	67	155	Reduced diarrhoea	88	67	155
	Wasted	75	75	150	Reduced Wasted	75	75	150
	Malnourished	70	70	140	Reduced Malnourish	70	70	140
	High ARI	65	55	120	reduced ARI	65	55	120
	Loss of appetite	77	54	131	Increase appetite	77	54	131

	More expense on treatment	81	70	151	Reduced expense on treatment	81	70	151
	Could not play well	85	80	165	Can play well	85	80	165
	Others	13	13	26	Others	13	13	26

They were asked on the safe hygiene and water purification methods. They reported as the dirty particles have been keeping in holes and buried, burn and throw in safe place from where smell were not felt. The dirty water was kept in sewage. They have started the purification of water by boiling, filtration, thrilling and bleaching. This practice was not much before the programme implementation by RWSSP-WN. This indicates that RWSSP-WN has success to implement these programme and good shape of BCC.

#### **4.1.43 COORDINATION OF RWSSP-WN**

The information by the respondents on the networking and collaboration of RWSSP-WN has found to be positive. In their view, RWSSP-WN works with grass root Volunteers, ward committee, VDC, health institutions, VWASHCC, DWASHCC, DDC, government organisations such as irrigation, agriculture within the coordination committee of the district under DDC.

#### **4.1.44 KNOWLEDGE ON CHANGES BROUGHT BY RWSSP-WN**

The information in table 43 above was supplemented by the overall achievements of RWSSP-WN. The respondents reported that the RWSSP-WN programme has encouraged for toilet construction and use; declared ODF; reduced diarrhoeal and other health problems; reduced malnutrition; promoted women's and child health status; raised capacity through training; formed different committees (Table:44) and in overall, change brought in integrated areas. A significant low number of respondents felt no change.

Table: 44 Knowledge on change brought by RWSSP-WN during five years

District	VDC	Change	PROGRAMME	REPLICATED	Total
9	18	Encouraged for toilet construction and use	68	12	80
		Declared ODF	68	11	79

		Reduced diarrhoeal incidence	41	4	45
		Reduced malnutrition	2	4	6
		Reduced children's and women health problems	15	2	17
		Raised capacity through training	14	4	18
		Formed different committees	22	6	28
		Nothing changed	10	1	11

#### **4.1.45 FUTURE EXPECTATION**

The respondents were asked about their future expectation with RWSSP-WN. They have not so much vague expectations. They reported that in the future, the RWSSP-WN would be better to stay long and long; provide regular supply and improvement of quality of drinking water; the second term project should be completed; awareness programme should be conducted long lasting; economic oriented trainings should be given; skill oriented trainings; equality and equity in supply of drinking water; full support in construction of sanitary latrine; provision of irrigation system; and should focus in water borne disease control (Table: 45)

Table: 45 Future expectations

District	VDC	Expectations
9	18	<ul style="list-style-type: none"> <li>• RWSSP-WN should stay long and long</li> <li>• Regular supply &amp; improvement of quality of drinking water.</li> <li>• The second term project should be completed.</li> <li>• Awareness Programme should be conducted long lasting.</li> <li>• Economic oriented trainings should be given.</li> <li>• Skill oriented trainings.</li> <li>• Equality &amp; equity in supply of drinking water.</li> <li>• Full support in construction of sanitary latrine.</li> <li>• Provision of irrigation system.</li> <li>• Focus in water borne disease control.</li> </ul>

		<ul style="list-style-type: none"> <li>Regular involvement in the maintenance, monitoring, supervision, refresher training, physical and human resource supports</li> </ul>
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#### **4.1.46 OBSERVATION OF HOUSEHOLD SITUATION**

The observation of the household and its surroundings were done in all sampled VDCs. The observation found the water was available for household use; soap for hand washing also found; few toilets had excreta outside toilets (11%); water shield was available; clean slab available; mosquito and fly was found; separate pot (only for washing after defecation) was found; available of toilet brush, detergent, ash, and the toilet easy to use by children and disabled. Few toilets were full of excreta and bad smelling. The overall impression from observation found to be positive.

The water pot was covered in most of the HH; house particles are kept anywhere as well as safe in different HH; washing platforms are managed safe with drying stand.

Thus, the WASH found good after implementation of RWSSP-WN programme.

Table: 46 Information from observation

District	VDC	Issues of Toilet	<i>PROGRAMME</i>	<i>REPLICATED</i>
9	18	Water available	80	86
		Soap is available	72	78
		Seen excreta outside toilet	20	72
		Water shield available	57	76
		Clean slab	66	63
		Seen Mosquito and fly	39	34
		Separate pot for washing after defecation	73	86
		Toilet brush		
		Detergent	56	58
		Ash available	32	90



		Bad smelling	27	94
		Full of excreta in hole	38	34
		Easy to use by children	51	10
		Easy for disabled	65	94
		<b><u>Household instruments</u></b>		
		The water pot has clot	3	- 33
		Water pot is covered	72	80
		Pots kept safe to children	74	48
		<b><u>House particles are kept at:</u></b>		16 20 64
		Anywhere	54	
		Pits	25	
		Collected in one place	24	40 40
		Others	44	20
		.....		
		.....		
		<b><u>Washing platform is:</u></b>		
		Well managed	66	
		Haphazard	34	
		Pots drying stand	51	

## CHAPTER 5

### 5. QUALITATIVE FINDINGS

#### 5.1 DESCRIPTION OF THE QUALITATIVE INFORMATION (FGD AND KII)

The qualitative information was gathered using Focus Group Discussion (FGD), Key Informant Interview (KII) guidelines and roster analysis checklist.

The numbers of the FGD, KII and rosters were as follows:

SN	District	Programme VDCs			Replicated VDCs			Total	Grand Total	
		VDC	KII *	FGD **	VDC	KII	FGD	Roster	KII	FGD
	<b>Terai</b>									
1	Kapilvastu	Mahendrakot	5	1	Banganga	5	1	2		
2	Nawalparasi	Dhaubadi	5	xx**	Panchanagar	5	1	2		
3	Rupendehi	Devdaha	5	1	Shankarnagar	5	xx	2		
<b>Terai Total</b>			<b>15</b>	<b>2</b>		<b>15</b>	<b>2</b>	<b>6</b>	<b>30</b>	<b>4</b>
	<b>Hills 1</b>									
4	Myagdi	Dana	5	1	Narchyang	5	xx	2		
5	Baglung	Bihunkot	5	xx	Sigana	5	1	2		
6	Parbat	Limithana	5	1	Mudikuwa	5	xx	2	<b>30</b>	<b>3</b>
	<b>Hills 2</b>									
7	Syanja	Alamadevi	5	xx	Birjha	5	1	2		
8	Tanahaun	Ghansikuwa	5	1	Raipur	5	xx	2		
9	Pyuthan	Swargadwarikhali	5	xx	Bhingri	5	1	2	<b>30</b>	<b>3</b>
<b>Hills total</b>			<b>30</b>			<b>30</b>		<b>12</b>		
<b>Total</b>			<b>45</b>	<b>5</b>		<b>45</b>	<b>5</b>	<b>18</b>	<b>90</b>	<b>10</b>

\*1=S/HP In charge; 2= VDC Secretary;3=FCHV; 4= Teachers; 5=Leading Mother (Total 5 from one VDC)

\*\* VWASH Committee members 5-8 in a group

\*\*\* No intervention (no FGD)

## **5.2 DESCRIPTION OF FGD PARTICIPANTS**

The instruments for FGD and KII were the same to compare the qualitative information from FGD and KII.

### **Participants by Description in the Project (P) and Replicated (R) VDCs.**

A total of 10 FGDs were conducted in ten VDCs with VWASH CC members out of 18 VDCs. Likewise 90 KII was done with S/HP in-charges, VDC secretaries, Teachers, Leading mothers (5 persons per VDC ie  $18 \times 5 = 90$ ). Likewise the 18 S/HP records on the morbidity and mortality of mother and children and incidence of diarrhoeal diseases were recorded.

The all FGD participants in 10 FGD sessions were 46 male and 16 female with a total of 62 persons. The sex ratio of FGD participants were 74% male and 26% female. Of them 38 (61.3%) was the member of VWASH CC, 7 (11.3%) active mother's group members and other organisation members like FCHVs, cooperatives were 17 (27.4%). Of them, 60 (96.8%) were the resident of the same VDCs and 2 (3.2%) outside VDC. Of the 62 participants, by profession 34 (54.8%) were engaged in agriculture followed by no profession 16 (25.8%) and service 12 (19.4%). Of the 62 participants, only 3 ((4.8%) were literate and remaining literate, secondary, and higher educated. All ethnic groups of all strata had participated.

## **5.3 DESCRIPTION OF KII PARTICIPANTS**

### **Participants by Description in the Project (P) and Replicated (R) VDCs.**

The total number of KII participants were 90, of them 53 (58.9%) was male and 37 (41.1%) female. The profession of these participants were service 75 (83.3%) followed by FCHVs 15 (16.7%). Likewise the position interviewed in the KII were 18 (20%) each of VDC secretaries, Lead mothers, and health persons- AHW, ANM and HAs. The teachers were 21 (23.3%) and FCHV 15 (16.7%). The service years of them was more of 3 years above 64 (71.1%) followed by 1-3 years 20 (22.2%) and below one year 6 (6.7%). Their education was SLC 54 (60%) followed by IA and above 18 each (20% each ie 40%).

## **5.4 ROSTER ANALYSIS**

The roster of the 18 health institutions were analysed on the mother and child mortality and morbidity and incidence of diarrhoeal diseases between five years periods (2063/64 to 2068/69 fiscal years).

## **5.5 FINDINGS AND DISCUSSION OF QUALITATIVE INFORMATION**

Findings and discussion of the qualitative information has been described together (FGD and KII due to same guidelines applied while having discussions and interviews.

### **5.6 LEADING OPINIONS OF THE POINTS DISCUSSED DURING FOCUS GROUP DISCUSSION (FGD) AND KII**

#### **1) Knowledge on the Rural Water Supply and Sanitation Project (Since its implementation period)**

The participants of FGD and KII have similar opinion on the programme implementation of RWSSP-WN in the programme and replicated VDCs. All of them opined that RWSSP-WN had started its programme since establishment of 3-4 years back. The date varies because, the programme have implemented in different years in different districts and VDCs as programme and replication processes. Thus, they have knowledge on the works that RWSSP-WN has initiated.

Both the FGD and KII findings indicate the types of works that RWSSP-WN has initiated as opined by the participants and respondents as it plays vital role in sanitation, hygiene and drinking water. According to the demand of the people, RWSSP-WN has been supplying safe drinking water, toilet constructions, training, health education, coordination between different organisations in district, VDCs and ward level, formation of WASH committees, organising meetings, workshops, recruiting local level staffs, providing materials, monitoring and supervising the programme activities, discussion sessions with local stakeholders and beneficiaries. These were the conclusion made in the discussion sessions in all VDCs and the responses of KII similar with the FGD and household survey. It is still helping us. Most importantly, the declaration of ODF VDCs and district is a major contribution made by RWSSP-WN (all participants and respondents).

#### **2) When the project was launched**

The opinion on the programme implementation varied in different VDCs such as

In 2064years Mahendrakot (2person)  
In 2055/2056 , Devdaha(2person)  
In2068, Bandganga(3person)  
In 2067, Dhaubadi(2persons)  
In 2065, Alamdevi(3persons)  
In 2067,Ghansikuwa(5persons)  
In 2066 Chaitra at Limithana.(4)  
In 2067 at Bihukot (3)  
In DDC Baglung it was established in 2064(2).  
In 2067 Chaitra at Dana(4).

### **3) What activities were initiated**

The information on the activities mentioned by FGD participants and KII respondents as mentioned above (no 1 point). They have added the activities as:

- Provision of safe drinking water , toilet, construction of overhead tanks (Dhaubadi VDC, Devdadha VDC) (5 person)
- TBC triggers training in VDC
- Supply safe drinking water in each house hold (Bandganga, Mahendrakot VDC)(7 persons)
- Technical support like training on drinking water and sanitation (Ghasikuwa VDC)
- The water of DHUS KHOLA was lifted by which KA,KHA,GA AAKANDE was implemented.
- This project provided reward money after VDC declared ODF and VWASHCC provided siphon ,cements, pipe to the poor people to upgrade the temporary toilets ,around 25 non-sanitary latrine were build up in ward wise (Alamdevi VDC) using the reward money.
- Awareness program on not to go for open defecation and importance of cleanliness, personal hygiene and sanitation.
- Planning for drinking water supply, its protection and preservation.(4 persons )
- Helped to make our VDC open defecation free (ODF) (Bihukot )
- It provides nutritional program trainings to teachers.(4)
- Promoter training.(3)
- Formation of WASH plan.
- Development of common fund.(2 Dana)
- Teaches on consumption of clean water from source to mouth.(7)
- Urine collection (5)
- Agricultural trainings & programmes.(5)
- Community health fund.(7)
- Helps in organization of health camp in co – ordination with youth clubs.(2)
- Establishment of emergency fund at each ward.(3)

### **4) Why these activities had been initiated**

- For health and sanitation (Mahendrakot VDC,Devdaha VDC)  
To declare ODF area (Dhaubadi VDC, Bandganga VDC)
- For the betterment of people in water, health and sanitary sector.(Alamdevi VDC)
- For behavioural change (ghasikuwa VDC)(2)
- To provide pure drinking water to VDC people.(Limithana VDC)
- To improve the health status of the community.(2)
- To prevent from different diseases.(4)
- To make people aware about different diseases due to unhygienic environment.(Bihukot VDC)
- To protect water sources.
- To provide the community people the minimum quality of life.(3)
- To keep the VDC neat, clean and green.(Dana VDC)
- To change the traditional beliefs, attitudes & practices of the people.(3)
- To prevent us from communicable & waterborne diseases.(2)
- to provide drinking water to all people.(4)

## **5) What structures and organogram were made to work by this project**

The discussion on the working structures and organogram in FGD and KII concluded that RWSSP-WN works by coordinating with VDC, wards, ethnicity, gender wise, VWASHCC and supervision by the higher level (Devdah, Mahendrakot). Beside this, it works in collaboration with Nepal government, DDC, VDC, Finida government, consumers committee, and drinking water organization. (Dhaubadia, Bandganga).

The working organogram is based on chain of system, superior level like DDC, VDC to inferior level like VWASHCC, community level (Alamdevi VDC, Ghansikuwa VDC). The committee is selected either by consensus or by election incorporating, male and female, advantaged to disadvantaged, marginalised, dalit, janajati groups, representative of all political parties, political institution at VDC and district level, volunteers health and WASH, teachers and social workers. Thus, it has a representative of all strata of society.

## **6) How do these structure and organogram work**

It is working as rules and regulation as directed from RWSSP-WN (all VDCs). Budget is allocated with DDC, VDC by RWSSP-WN, user's group, their direct fund and investment. They have regular meetings, monitoring, supervision and progress review meetings and review reports share between the members of the committees. It also works according to identification of problems which are discussed at meetings, problems are prioritized and effective actions are taken to solve them. Problems are first identified from ward levels which are then discussed in meetings and solutions are extracted.

## **7) What were the main priorities of this project?**

The discussion and interview revealed the priorities of support in various forms. Some of the revealed the support in construction of toilet and safe drinking water, health- hygiene and sanitation and changing to healthy behaviour trainings, formation of groups and committees, fund raising and monitoring and evaluation of the implemented programme activities. The other main priority is to declare the ODF society in the programme and replicated VDCs.

## **8) What Physical assistance has given by this project**

The RWSSP-WN invest for, drinking water taps in the schools, common places and in HH level, construction materials for institutional toilet, taps and water sources, tanks and filters (synopsis of all group discussion and KII responses).

## **9) Do this project have formed WASH Coordination Committee (WASHCC) in the District and VDC level.**

The discussion and KII responses revealed that they have knowledge on the ways of committee formation initiated by RWSSP-WN. The selection process was based on peoples interest, comprising of total 48 member in a committee to 12 members based on the interests and availability of volunteers combining of all strata of society (gender, ethnicity, etc), VWASHCC, CHASAC committees are named in some places. VWASHCC is formed in each VDCs and other committees are formed as per the situations of specific VDCs.

#### **10) Why the Committee have been formed, what are the reasons**

The participant's opinion on the reasons of formation of the committee by RWSSP-WN are for easy working at the community level, to mobilize the committee member in the VDC, so that it is easy to work and their participation make them the activities are of their own and helps for sustainability of the activities, it has formed also for supervision, advocacy and to help to run the project smoothly. It is also formed for identification of problems at grass root level, prioritise by themselves and ultimately for BCC success (same to all VDCs). They have contributed during the installation, construction, care and advocacy on water supply, hygiene and sanitation. It has helped to make ODF VDCs. Thus, the local committees have formed for the bottom up approach rather than top down for better participation of local people.

#### **11) How is the water condition in this district and VDC**

The water was not sufficient before RWSSP-WN presence. People were bound to fetch water even an hour walking in the hills. The condition in terai before the programme also was not good. They had fetched water from pond where animals also use, and some common tube well and well (*Inar*). The schools, health institutions and offices had scarcity of water sources. But, now, after RWSSP-WN, water supply, safe and sufficient is not the problem.

#### **12) What was the water condition in the district/VDC before RWSSP-WN project**

Rain water, water from ponds, open places, natural bamboo pipe, rivers were the sources. But, after RWSSP-WN, the tap water is mostly available in HH, institution, common place levels. Now is sufficient for all people. Their time of fetching water has significantly been reduced.

#### **13) What sorts of health, hygiene and sanitation project have been implemented in the district/VDC**

The programme is comprehensive implemented by RWSSP-WN. The reduction of health problems is thought to be better management of health service outlets by many institutions. But, RWSSP-WN has started comprehensive programme as a determinants of health and healthy lives for better preventive measures form ill health. Construction of toilet, water supply, hygiene education ultimately controls diarrhoea, malnutrition and other human health problems. For this, huge amount of physical, human, financial and infrastructural resources have been invested by RWSSP-WN in districts, VDCs and wards, institutions, public concern places and household level.

Water supply (taps, tube wells, sprouts etc) , sewages, toilet constructions, strengthening health service outlets, sources for drugs, health and hygiene education, advocacy, counselling, implementations, financial supports, reward system, compensation system, workshops, talk programmes, meetings, seminars, exposure visits, communications, promotion of IEC materials and distributions, hoarding boards, leaflets, journals, reports, training manuals, constructions, supply and many more have been provided by RWSSP-WN. Thus, within a short period (5 years duration) the ODF have been declared in districts and VDCs as reported by the FGD and KII participants.

#### **14) What are the benefits from these project and what are the harms**

The discussion revealed that the benefits are uncountable that if RWSSP-WN would not have been in our locality we would be suffered from multiple problems such as health problems, poor quality of lives due to scarcity of water, food, education, malnutrition, maternal and child morbidity and mortality, poor hygiene and so on.

The harms are not seen but people might have more expectation towards availability of other needs such as assistance to construct their own houses, school buildings, health institutions, and scholarship for school children, dress, books and stationeries, Tiffin to school children for ever. The dependency may be raised.

But the skill development training and objectives and duration of RWSSP-WN programme have been well explained and people know that this programme will not be longer than 5 years and it will be shifted to other districts and VDCs as replication of the programme to the needy people. Thus, the people have good satisfaction and the committees will work for further management, maintenance and care of their concerns.

#### **15) Who have been benefitted since 5 years back from the project (Elderly people, women, backward group...)**

The discussion and KII information are aware of the people who have been benefitted. The richest families who had toilets also got health education on hygiene of persons and toilets. They also got drinking water safe, exposed with new ventures and all benefits from the programme etc. Likewise who had no toilet facilities, drinking water facilities and education on water, hygiene, and sanitation especially very and ultra poor, marginalised, dalit, deprived, backward, women men, children, elderly (all ages) have given priority and got benefitted. Thus, all of the inhabitants' got benefit from the project.

#### **16) How the project has contributed to control diarrhoea (Explain pre and post project condition)**

The diarrhoeal condition in the pre implementation of RWSSP-WN was worse. The household survey also has revealed the condition was worse such as diarrhoeal incidence was frequent and high, high rate of malnutrition, loss of appetite of the children, expensive treatment costs, children were reluctant to play, could not eat well and mortality and morbidity of children was high and likewise.

But, after the implementation of RWSSP-WN programme, the situation has dramatically changed (FGD discussion) and all the above condition is just reversed (KII information). The mortality of children due to diarrhoea is about nil, if dies that is due to other reasons but not diarrhoea because all have known the preventive measures, treatment seeking behaviour and use of liquids and ORS during diarrhoea, children's hygiene, nutritious foods, frequency of food taking and education and conscious level have raised and have better position of all the children and family. The ODF has become the core for the reduction of such problems.



**17) How the project has contributed to promote Hygiene and Sanitation (Explain pre and post project condition).**

The discussion and KII responses revealed that the hygiene and sanitation status of the people before RWSSP-WN programme was too poor. As stated in no16 above, the situation for water supply, hygiene and sanitation was extremely poor. For each of concern of household needs, for better hygiene and for washing practices, for better sewage, water is vital. The districts and VDCs were in the scarcity of water and then had badly affected with many problems associated with water availability. Open defecation was common in all VDCs.

But, after the programme of RWSSP-WN, gradually the situation improved and in this stage now, no one is in crisis of water. All have got water, toilets, education, better hygiene, changed previous behaviour to keep the family healthy and no one is dying due to diarrhoeas and the women are attending health institutions for pregnancy checkups (ANC), treatment of pregnancy complications and for delivery. Thus, there is no maternal death too.

**18) Is there any progress in constructing Toilets and its use**

The discussion viewed that all households have any types of toilets, and thus have declared ODF. The neighbours where the programme has not been implemented also following the process for ODF and maintaining by their own effort.

**19) Contributions in assisting for Toilets (Rewards, assistance, counselling and reasons)**

There is reward system like if someone constructs toilets and has scarcity of materials, on the basis of WASHCC and local staff's recommendation; There is rigorous counselling system by the field staffs, volunteers and WASHCC for encouraging to construct, maintain, use, keeping hygienic and sustainability.

**20) How the project has contributed to reduce maternal and child mortality (Explain pre and post project condition)**

The FGD and KII opined the same thing as explained in 15, 16, and 17 above. The maternal and child morbidity and mortality was high before the programme due to their traditional practices, cultural taboo such as no liquid during diarrhoea, food taboos during pregnancy, lactating period. Personal care during menstruations, home delivery, poor diet and hygiene, open defecation, contaminated water use, animal husbandry within the house, illiteracy and unawareness on household workload distribution, gender biasness, big family size, low short spacing of birth and many more opined by FGD and KII participants.

After RWSSP-WN programme within five years duration, all previous *practices* have converted towards positive *systems*. The societies now are ODF. The situation now is no morbidity and mortality of children and women due to WASH activities.

**21) How the project has contributed to promote health and Nutrition**

The views of the FGD and KII participants on the health and nutrition are positive. The traditional practices have been converted to system such as regular ANC, TT injection and de-worming during pregnancy, use of ORS and liquids and treatment during diarrhoea, proper and nutritious foods to all members especially to children, pregnant and elderly persons, proper sanitation, good personal hygiene and its habits such as hand washing, bathing, washing clothes etc, use of safe water, separating animal sheds outside home, good sewage, managing properly children's excreta, no open defecation, better knowledge, empowerment, inclusion of excluded groups in programme equally with other people, etc are the contribution made by RWSSP-WN during programme periods.

## **22) How the project has contributed to Schools**

The schools are also benefitted with the construction of toilets, drinking water, water storage tanks, materials, maintenance, sewages, training to teachers, incorporating teachers in WASHCC, orientation on WASH to school children, advocacy, and participation in school programmes by the staffs of RWSSP-WN and so on.

## **23) How the project has contributed to DDC and VDC**

The discussion revealed that the contribution to VDC and DDC by RWSSP-WN are in many ways. The VDCs and DDCs have formed VWASHCC and DWASDH CC, has position of staffs in each districts from RWSSP-WN, provides budgets, trainings, exposure visits, forms different committees, coordination, programme incorporating in yearly plan of DDC, and assistance as per the requirement and within the RWSSP-WN's plan and system.

## **24) What recommendation you want to make to RWSSP-WN for future activities (list the activities)**

The general recommendations from the FGD and KII participation, the opinions have been listed. They opined as *"If possible and has in the plan of RWSSP-WN, the following have been recommended."*

1. Completion of drinking water project (Mahendrakot VDC)
2. Skill oriented programme-all VDCs
3. Waste management programme, waste as a alternative use (training and exposures)-all VDCs
4. Provision of irrigation facilities (Aalamdevi Devi VDC )
5. Provision of lifting the water from "Aandhi khola" river (Aalamdevi VDC )
6. Reconstruction of schools buildings(Aalamdevi Devi VDC )
7. Regular supervision and monitoring of constructed toilet and water tanks and pipe lines -all VDCs
8. Additional/refresher training on sanitation and nutritional programmes to FCHVs, school teachers and mother groups-all VDCs.
9. Water treatment plant and filtration of water source.
10. Remaining plan and programme should be fulfilled.
11. Regular support for the maintenance, repair, construction modern toilets, changing liked pipes of water are necessary.

## CHAPTER 6

### 6. ROSTER ANALYSIS

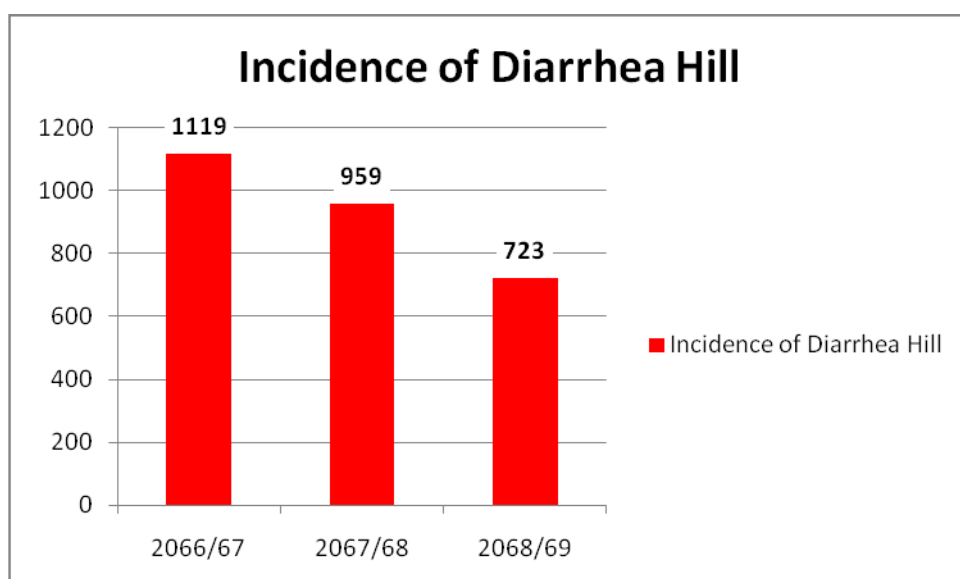
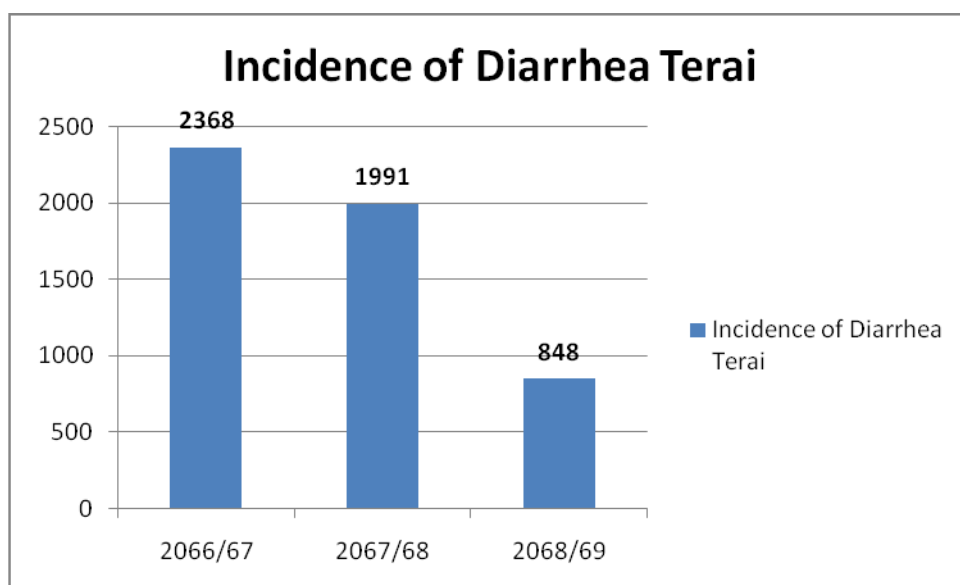
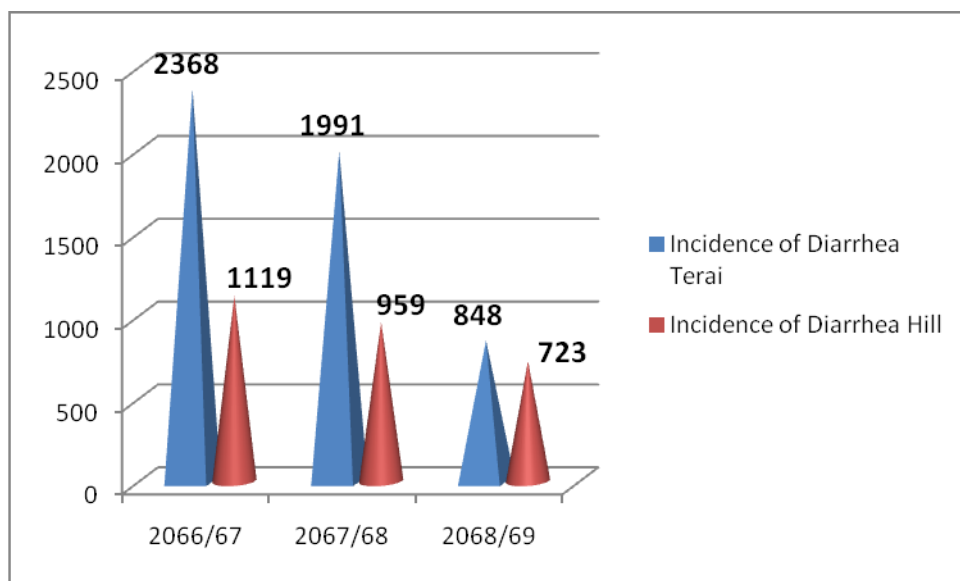
#### 6.1 ROSTER ANALYSIS OF THE HEALTH INSTITUTIONS OF RWSSP-WN WORKING DISTRICTS/VDCs

The roster of health institutions were observed and recorded in the sampled VDCs. There are 13 health institutions records, others had no records. The information on the incidence of diarrhoeas and child morbidity, mortality, as well as maternal morbidity and mortality were recorded. The following table shows the incidence of diarrhoeas and child morbidity. The specific VDC wise tables given below also explain the incidences, mortality, morbidity and their causes.

Table: 47 Incidence of diarrhoea and child mortality

District	VDC	Incidence of Diarrhoea (Number )						Child Mortality (Number %)					
		2063 /64	2064/6 5	2065 /66	2066/ 67	2067 /68	2068 /69	2063/ 64	2064 /65	2065 /66	2066 /67	2067/ 68	2068/ 69
Kapilvastu	Mahendrakot	NA*	820	578	744	908	622	NA	NA	nil	nil	nil	nil
	Badganga												
Nawalparasi	Dhaubadi	NA	NA	274	261	170	122	NA	nil	nil	nil	nil	nil
	Panchanagar	NA	NA	147	395	NA	NA	NA	nil	nil	nil	NA	NA
Rupendehi	Debdaha	NA	180	995	968	913	104	NA	nil	nil	nil	nil	nil
	Shankarnagar												
<b>Total terai</b>			<b>820</b>	<b>1994</b>	<b>2368</b>	<b>1991</b>	<b>848</b>						
Myagdi	Dana	24	49	43	27	51	NA	nil	nil	nil	nil	nil	nil
	Narchyang												
Baglung	Bihunkot	NA	NA	65	86	52	49	NA	NA	nil	nil	nil	nil
	Sigana												
Parbat	Limithana	NA	NA	26	28	22	20	NA	NA	nil	nil	nil	nil
	Mudikuwa	NA	NA	38	42	34	35	NA	NA	nil	nil	nil	nil
Syangja	Alamdebi	NA	NA	NA	207	182	167	NA	NA	NA	nil	nil	nil
	Birgha	NA	NA	NA	293	262	203	NA	NA	NA	nil	nil	nil
Tanahun	Ghasikuwa (Raipur)	NA	NA	NA	191	153	85	NA	NA	NA	nil	nil	nil
	Raipur	NA	NA	NA	245	203	164	NA	NA	NA	nil	nil	nil
Pyuthan	Swargadwari												
	Bhingri												
<b>Total hill</b>		<b>24</b>	<b>49</b>	<b>172</b>	<b>1119</b>	<b>959</b>	<b>723</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

\* NA= Not available



**District wise records of incidence of diarrhoea, morbidity, mortality, causes and types of health problems are as follows:**

In Kapilbastu district, only one SHP that is Mahendrakot had records of diarrhoea and morbidity. The Banganga had no records.

The Mahendrakot SHP records from 2063/64 to 2068/69 (2007/08 to 2011/12) were recorded. The incidence of diarrhoea among reported cases in health institution was found reduced. But, this reduction cannot provide the real picture of diarrhoea. It depends upon how many families have reported to the health institution. There may be less diarrhoea and reporting rate may be high and/or the diarrhoeal cases are treated at home. This situation applies to all S/HPs.

Whatever the figures are available in the SHP, it shows the reduction of the cases (51% in 2007/08 to 39% in 2011/12).

Likewise the child morbidity (all sorts of child health problems including diarrhoea) has shown changed significantly which was 66% in 2007/08 and reduced to 16% in 2011/12. This shows highly significant reduction on child morbidity. No any mortality of child found in all years.

On the contrary, maternal morbidity (all health problems of women visited SHP) found increased from 41% in 2007/08 to 2011/12.

The records show that the causes of diarrhoea of the children are non infectious, amoebic and bacillary. The child morbidity is due to the pneumonia, abdominal pain, and fever and skin infection which are not the direct cause of diarrhoea. Abdominal pain may be due various reasons. There was no record of stool examination, may be the facility of laboratory is not available in the SHP.

The major causes of maternal (women) morbidity recorded are APD (Acute Peptic Disease), P.I.D. (Pelvic Inflammatory Disease), Gastritis and joint pain. No maternal mortality have recorded in all years.

In Baglung district, two SHPs, only Bhiukot SHP had records of diarrhoea and morbidity.

The Bihukot SHP records from 2063/64 to 2068/69 (2007/08 to 2011/12) were recorded. The incidence of diarrhoea among reported cases in health institution was found reduced.

Whatever the figures are available in the SHP, it shows the reduction of the cases (n=65 in 2007/08 to n=49 in 2011/12).

The child morbidity (all sorts of child health problems including diarrhoea) has shown increased which was n=103 in 2007/08 and increased to n= 138 in 2011/12. This shows slight raise on child morbidity. This may be the seasonal health problems and the consultation practice to health institution may have raised due to BCC programme of RWSSP-WN. No any mortality of child found in all years.

Likewise, maternal morbidity (all health problems of women visited SHP) found increased from n=42 in 2007/08 to n= 49 in 2011/12.

The records show that the causes of diarrhoea of the children are due to infected water, and contaminated food.

The child morbidity is due to environment change, poor nutritious food, and lack of proper personal hygiene.

The major causes of maternal (women) morbidity recorded are excessive work load and bleeding.

The records of Dana SHP of Myagdi district of 2007/08 to 2011/12 shows the diarrhoeal incidence has been reduced from the fiscal year of 2008/09 onwards (56% to 44%). But, the child morbidity has seen increased from 96 cases to 115 cases. Maternal morbidity has significantly reduced from 215 to 145 cases. No any child and maternal mortality found in between five years periods. Bacterial cause has been recorded for diarrhoea infection. The morbidity reasons of children recorded as lacking care in seasonal illness and lack of exclusive breast feeding. Maternal morbidity has recorded as low ANC and PNC visits and complications during pregnancy. No any mortality of child and mother are recorded during five year periods.

The incidence recorded in the roster of Dhaubadi SHP, Nawalparasi showed significant reduction of diarrhoeal disease 18% in 2009/10 and 8% in 2011/12. Child morbidity seems stagnant but no child mortality. The maternal morbidity has also significantly decreased from 75% in 2009/10 to 2% in 2011/12 and no any maternal mortality has been recorded.

The diarrhoea has found as of non-infectious, amoebic and bacillary. The child morbidity was of Pneumonia, abdominal pain and fever and skin problems. Maternal morbidity was recorded as of APD, PID, gastritis and joint pain

The incidence recorded in the roster of Panchanagar HP, Nawalparasi has no record except two fiscal years. Thus, cannot analyse the situation. Whatever the registration of diarrhoeal cases was non infectious and amoebic with morbidity of pneumonia, abdominal pain and fever.

The diarrhoea has found as of non-infectious, amoebic and bacillary. The child morbidity was of Pneumonia, abdominal pain and fever and skin problems. Maternal morbidity was recorded as of APD, PID, gastritis and joint pain.

The maternal morbidity was APD, PID and joint pain.

Encouragement for data keeping is necessary.

The incidence recorded in the roster of Limithana SHP, Parbat district showed slight reduction of diarrhoeal disease n=26 in 2009/10 and 20 in 2011/12. Child morbidity seems stagnant but no child mortality. The maternal morbidity has also slightly decreased from n=37 in 2009/10 to n=31 in 2011/12 and no any maternal mortality has been recorded.

The diarrhoea has found as of infected water, contaminated food and unhygienic environment. The child morbidity was nutritional problem and environmental problems. Maternal morbidity was due to excessive work load and bleeding.

The recording system in the S/HP seemed to be very poor and inconsistency.

The incidence recorded in the roster of Mudikuwa SHP, Parbat district showed the trend as reduction of diarrhoeal disease n=42 in 2010/11 and n=35 in 2011/12. Child morbidity seems reduced but no child mortality. The maternal morbidity has also significantly decreased from n=54 in 2009/10 to n=34 in 2011/12 and no any maternal mortality has been recorded.

The reasons of diarrhoea has found due to lack of nutritious food, use of contaminated food and climate change. The child morbidity was due to lack of exclusive breast feeding, sanitation and hygiene. Maternal morbidity was recorded as due to the lack of ANC and PNC visits, early pregnancy and lack of proper care during pregnancy.

The recording system in this SHP also is poor.

The incidence recorded in the roster of Raipur SHP, Pyuthan district showed reduction of diarrhoeal disease 29% in 2010/11 and 19% in 2011/12. Child morbidity seems a slight reduced but no child mortality. The maternal morbidity has shown increased from n= 2832 in 2010/11 to n= 3175 in 2011/12 and no any maternal mortality has been recorded.

The diarrhoea has found as of non-infectious, amoebic and bacillary. The child morbidity was of ARI, ear infection and fever and skin problems. Maternal morbidity was recorded as of UTI, APD, PID, and joint pain.

The recording system in this SHP also is poor.

In the Raipur SHP of Pyuthan district, no record found.

The incidence recorded in the roster of Devdaha SHP, Rupandehi district showed reduction of diarrhoeal disease 22% in 2008/09 and 13% in 2011/12. Child morbidity seems a high but no child mortality. The maternal morbidity record was not found and no any maternal mortality was recorded.

The diarrhoea has found as of non-infectious, amoebic and bacillary. The child morbidity was of pneumonia, fever, skin infection and abdominal pain. Maternal morbidity was not recorded.

The recording system in this SHP also is poor.

In the Devdaha SHP of Rupandehi district, no record found.

The incidence recorded in the roster of Rajpur SHP of Amaladevi VDC, Syangjha district showed reduction of diarrhoeal disease 34% in 2010/11 and 28% in 2011/12. Child morbidity seems also reduced and no child mortality. The maternal morbidity was also reduced from 68% in 2010/11 to 56% in 2011/2012.

The diarrhoea has found as of amoebic and bacillary, dysentery and other morbidity was ARI, ear infection and Jaundice. Maternal morbidity was APD, PUO, menstrual disorder and skin infection.

The recording system in this SHP also is poor.

The incidence recorded in the roster of Birgha (Raipur SHP) VDC of Syangjha district showed reduction of diarrhoeal disease 36% in 2010/11 and 31% in 2011/12. Child morbidity seems also reduced and no child mortality. The maternal morbidity was also reduced from 57% in 2010/11 to 51% in 2011/2012.

The diarrhoea has found as of amoebic and bacillary, dysentery and other morbidity was ARI, ear infection and Jaundice. Maternal morbidity was APD, respiratory problem and menstrual disorder.

The recording system in this SHP also is poor.

The incidence recorded in the roster of (Raipur SHP VDC of Tanahaun district showed significant reduction of diarrhoeal disease 34% in 2010/11 and 15% in 2011/12. Child morbidity seems also reduced and no child mortality. The maternal morbidity was recorded high from n=946 in 2010/11 to 1440 in 2011/2012.

The diarrhoea has found as of non infectious. other morbidity was ARI, and ear infection. Maternal morbidity was RTI, PUO, APD, and PID.

The recording system in this SHP also is poor.

The incidence recorded in the roster of Ghasikuwa SHP of Tanahaun district showed reduction of diarrhoeal disease 26% in 2010/11 and 21% in 2011/12. Child morbidity seems stagnant and no child mortality. The maternal morbidity was also reduced from 25% in 2010/11 to 23% in 2011/2012.

The diarrhoea has found as of amoebic and bacillary, dysentery and other morbidity was ARI, ear infection, fever, malaria, and measles. Maternal morbidity was vaginal discharge syndrome, breast abscess, APD, PID, and leucorrhoea (white thick vaginal discharge).

The recording system in this SHP also is poor.

The records have indicated the health scenario of both child and mother has been changed better. But the crucial matter is that the recording systems of health institutions found to be too poor. Thus, the records have no reliability; this does not provide the picture of the health status of child and mothers.



## **CHAPTER 7**

### **7. CONCLUSION AND RECOMMENDATION**

#### **7.1 CONCLUSION**

The situation before the RWSSP-WN programme was devastating as open defecation was maximum, fetching water had taken long hours, and child morbidity due to diarrhoea was very high, personal hygiene was too poor. Now, people express their easy life. Each households have own toilets. Schools, health institutions and common places have safe toilets and availability of drinking water. The VDCs are declared as ODF. They know the steps and processes of keeping hygienic lives, practicing the management of diarrhoea of their children, better health positions and healthy living.

The rural water supply, hygiene and sanitation programme in western Nepal (RWSSP-WN) have successful achievements in the programme districts and VDCs. The life styles of the people have changed. The behaviours related to hygiene and sanitation has been positive significantly. The incidence of diarrhoea, morbidity and mortality is reduced significantly of the children and mothers. No persons are in scarcity of toilet and drinking water. All ethnic groups especially dalits and marginalised are in position like other people.

#### **7.2 RECOMMENDATION**

Regular monitoring and supervision, maintenance of the taps and toilets of the implemented VDCs are necessary. Handover of the programme to the local committees should be done gradually.

The records of health institutions are too poor. They should be encouraged to make report through DHO/DPHOs in the respective districts

Regular advocacy, health education, counselling on the importance of hygiene and sanitation are necessary.

Refreshers training on hygiene, sanitation and skill development are the demand from the users' group and committee members, this should be organised.

People need training on methods of filtration and purification processes of available water for safe use.

The programme is successful. The programme would be better to replicate in other districts and VDCs where open defecation and scarcity of water are the problem in Western and Far Western Regions.

The respondents were asked (HH) about their future expectation with RWSSP-WN. They have not so much vague expectations. They reported that in the future, the RWSSP-WN would be better to stay long and long; provide regular supply and improvement of quality of drinking water; the second term project should be completed; awareness programme should be conducted long lasting; economic oriented trainings should be given; skill

oriented trainings; equality and equity in supply of drinking water; full support in construction of sanitary latrine; provision of irrigation system; and should focus in water borne disease control.

The general recommendations from the FGD and KII participants, the opinions have been listed. They opined as *"If possible and has in the plan of RWSSP-WN, the following have been recommended."*

1. Completion of drinking water project (Mahendrakot VDC)
2. Skill oriented programme-all VDCs
3. Waste management programme, waste as a alternative use (training and exposures)-all VDCs
4. Provision of irrigation facilities (Aalamdevi Devi VDC )
5. Provision of lifting the water from "Aandhi khola" river (Aalamdevi VDC )
6. Reconstruction of schools buildings(Aalamdevi Devi VDC )
7. Regular supervision and monitoring of constructed toilet and water tanks and pipe lines -all VDCs
8. Additional/refresher training on sanitation and hygiene and nutritional programmes to TBC triggers, FCHVs, school teachers and mother groups-all VDCs.
9. Water treatment plant and filtration of water source.
10. Remaining plan and programme should be fulfilled.
11. Regular support for the maintenance, repair, construction modern toilets, changing liked pipes of water are necessary.

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## APPENDICES

### **Rural Water Supply and Sanitation Project-Western Nepal Health Impact Study of the RWSSP-WN Program February-March 2013**

#### **Consent form for HH and KII Survey**

Namaste, My name is .....and I am from RWSSP-WN, Pokhara. I would like to take some information about water supply, sanitation and hygiene from you. Your information makes easy to RWSSP-WN to promote effective programme in future. Your name will not be included anywhere. Your opinions will be kept confidential. You will not be forced for participation and your participation will not be against your will.

If you agree, please sign below.

I accept ( )

I do not accept ( )

Name of the respondent.....Signature.....

Name of the interviewer.....Signature.....

Date.....

#### **Nepali version**

**पश्चिम नेपाल ग्रामीण खानेपानी तथा सरसफाई परियोजना**

**भेटनेरी मार्ग, पोखरा**

**खानेपानी, स्वस्थ तथा सरसफाई कार्यक्रम सर्वेक्षण र समूहगत छलफल**

नमस्ते मेरो नाम ..... हो र म ग्रामीण खानेपानी पोखराबाट आएको हु । म तपाईंहरु सँग खानेपानी स्वास्थ्य तथा सरसफाई सम्बन्धी केही जानकारी लिन चाहन्छु । तपाईंले दिएको जानकारीले यस संस्थालाई भविष्यमा अझ प्रभावकारी कार्यक्रम गर्न सजिलो पार्ने छ । तपाईंहरुको नाम कतै उल्लेख गरिने छैन । तपाईंका विचारहरु गोप्य राखिने छन् । तपाईंलाई कुनै करकाप गरिने छैन । तपाईंको सहभागिता तपाईंको इच्छा विपरित हुने छैन । यदि तपाईं सहमत हुनुहुन्छ भने दस्तखत गरिदिनुहोस्

सहमत छु ( )

सहमत छैन ( )

उत्तरदाताको नाम

दस्तखत .....

मिति

प्रश्नकर्ताको नाम-१

दस्तखत .....

२

दस्तखत.....

**Rural Water Supply and Sanitation, Western Region**  
**Health Impact Study of RWSSP WN Program**  
**Feb-March 2013**  
**Household Survey Questionnaire**

District .....

VDC.....

Ward.....

Tole.....

Name of the respondent..... Age .....

Sex.....

Name of the Interviewer.....

Date.....

QN	Questions	Circle possible answers	Remarks
1	Ethnicity of the respondent	Dalit.....1	
		Janajati.....2	
		Backward Terai.....3	
		Muslim.....4	
		Brahman/Chhetry.....5	
		Others (Mention).....6	

QN	Question	Circle possible answers	Remarks
2	Family number	Male.....1	
		Female.....2	
		Total.....	

QN	Question	Circle possible answers	Remarks
3	>1 year child (Total.....)	Boy.....1	
		Girl.....2	

QN	Question	Circle possible answers	Remarks
4	>5 year child (Total.....)	Boy.....1	
		Girl.....2	

QN	Questions	Circle possible answers	Remarks
5	Age group by sex	> 1 year (Male.....Female.....Total.....)	
		1-5 year (Male.....Female.....Total.....)	
		6-14 year (Male.....Female.....Total.....)	
		15-49 year (Male.....Female.....Total.....)	
		50-60 year (Male.....Female.....Total.....)	

		60 years above (Male.....Female.....Total.....)	
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QN	Questions	Circle possible answers	Remarks
6	Life events	Birth registration.....1	
		Death registration..... 2	
		Marriage registration.....3	
		No any registration.....4	

QN	Questions	Tick possible answers			Total (N/%)
7	Educational Status	Category	Male (N/%)	Female (N/%)	
		Illiterate			
		Literate			
		SLC			
		+2/IA			
		Bachelor			
		Above than Bachelor			
Grand total					

QN	Questions	Circle possible answers	Remarks
8	Income source of Family	Agriculture.....1	
		Business ..... 2	
		Labouring.....3	
		Service.....4	
		More than one occupation.....5	

QN	Questions	Circle possible answers	Remarks
9	Sufficient from Income	Less than 3 months.....1	
		3-6 months..... 2	
		6-9 months.....3	
		9-12 months.....4	
		One year and surplus for sale.....5	

QN	Question	Circle possible answers	Remarks
10	Affiliation with	Yes.....1	

	any institutions	No.....2	
--	------------------	----------	--

QN	Question	Circle possible answers	Remarks
10.1	If yes, how many members	Female (Total.....).....1	
		Male.....(Total).....2	
Grand total			

QN	Statements	Statements	Right	Wrong	Don't know	Total
11		8. Only women must do household work  9. Only male must do outside home works  10. Only women must care children  11. No women are allowed to be the member of Consumer's Forum  12. No women are allowed to work as labourer  13. Only son have property right  14. Only son is allowed to go to school				

### Health and Sanitation

QN	Question	Circle possible answers	Remarks
1	Utilisation of Toilets by family?	Yes.....1	Do not ask qn 6,7,8
		No.....2	Go to 7

QN	Question	Circle possible answers	Remarks
2	If yes, types of toilets	Private.....1	Do not ask QN 6,7, and 8
		Community.....2	
		Common for all family members at home.....3	
		Pot.....4	

	Concrete (specify).....5	
	Normal.....6	

QN	Question	Circle possible answers	Remarks
3	Why you have made toilet (reasons)?	For the sake of health .....1	Do not ask QN 6,7, and 8
		For easiness.....2	
		For prestige.....3	
		For cleanliness/hygiene.....4	
		Due to pressure from society.....5	
		Others (specify).....6	

QN	Question	Circle possible answers	Remarks
4	What do you do if toilet is full?	Leave as it is.....1	
		Make another new one.....2	
		Make clear.....3	
		Others (specify).....4	

QN	Question	Circle possible answers	Remarks
5	Do all family members use toilet?	Yes.....1	Go to QN 9
		No.....2	

QN	Question	Circle possible answers	Remarks
6	If no, who in the family only use (multiple questions)	Adult male.....1	
		Adult female.....2	
		Elderly people.....3	
		Children.....4	
		Others (specify).....6	

QN	Question	Circle possible answers	Remarks
7	If do not use toilet, then where use to defecate?	Forest.....1	
		River.....2	
		Open places.....3	
		Kitchen garden.....4	
		Road side.....5	
		Cannel.....6	



	Anywhere.....7	
	Others (specify).....8	

QN	Question	Circle possible answers	Remarks
8	Why you did not make toilet? (multiple response)	Not necessary.....1	
		No knowledge.....2	
		No benefit.....3	
		Expensive.....4	
		No material available.....5	
		No land.....6	
		Traditional practice.....7	
		Others (specify).....8	

QN	Question	Circle possible answers	Remarks
9	What do you do if you see child's excreta around your house?	Through in toilet.....1	
		Cover by dust/soil.....2	
		Fed to animal (dog, pig).....3	
		Leave as it is.....4	
		Others (specify).....5	

### Cleanliness/Hygiene

QN	Question	Circle possible answers	Remarks
1	Do you wash inside the pot before fetching water?	Yes.....1	Go to QN 3
		No.....2	

QN	Question	Circle possible answers	Remarks
2	If yes, what do you use to wash? (multiple answer)	Only water.....1	
		Soil.....2	
		Ash.....3	
		Soap.....4	
		Straw.....5	
		Paddy cover.....6	
		Leafs.....7	

	Steel Jhush.....8	
	Others (specify).....9	

QN	Question	Circle possible answers	Remarks
3	When do you wash your hands? (multiple answer)	After defecation.....1	
		Before cooking.....2	
		After food.....3	
		After children's defecation.....4	
		Before child feeding.....5	
		Before food keeping in plate.....6	
		Others (specify).....7	

QN	Question	Circle possible answers	Remarks
4	What material do you use to wash hands? (multiple answer)	Only water.....1	
		Soil.....2	
		Ash.....3	
		Soap.....4	
		Straw.....5	
		Paddy covers.....6	
		Others (specify).....7	

QN	Question	Circle possible answers	Remarks
5	How do you manage used water? (multiple answer)	Throw in Kitchen garden.....1	
		Mix in Sewage.....2	
		Keep covered.....3	
		Throw anywhere.....4	
		Others (specify).....5	

QN	Question	Circle possible answers	Remarks
6	How do you manage animal excreta? (multiple answer)	Keep in hole.....1	
		Keep in cow shed.....2	
		Keep covered.....3	
		Throw anywhere.....4	
		Others (specify).....5	

QN	Question	Circle possible answers	Remarks
7	Where do you keep your house animals at night?	Inside house.....1	
		Outside house (Cow shed).....2	
		Open land (open sky).....3	
		Others (specify).....4	

QN	Question	Circle possible answers	Remarks
8	Which animals do you keep inside house? (multiple answer)	Cow/Ox/Buffalo...1	
		Dog/Duck.....2	
		Chicken.....3	
		Pig.....4	
		Goats.....5	
		Others (specify).....6	

### Health Related

QN	Question	Circle possible answers	Remarks
1	What type of oven do you use at your home?	Made by mud.....1	
		Smokeless.....2	
		Made by brick.....3	
		Hole only.....4	
		Others (specify).....5	

QN	Question	Circle possible answers	Remarks
2 and 3	Did you fed deworming tab/syrup to your >5 years children within 6 months?	Yes.....1	
		No.....2	

QN	Question	Circle possible answers	Remarks
4	Did you provide any immunization to your > 5 year children? (multiple answer)	BCG.....1	
		DPT.....2	
		Polio.....3	
		Measles.....4	

QN	Question	Circle possible answers	Remarks
5	Are any >5 yrs child in your family died within 1 year?	Yes.....1	
		No.....2	

QN	Question	Circle possible answers	Remarks
6	Is there any maternal death in your family within 1 year?	Yes.....1	
		No.....2	

QN	Question	Circle possible answers	Remarks
7	Are there any Arsenic Problem in your family	Yes.....1	(only for Terai)
		No.....2	

QN	Question	Circle possible answers	Remarks
8	Do you take regular weight of your > 5 year children?	Yes.....1	
		No.....2	

QN	Question	Circle possible answers	Remarks
9	If yes, observe the card and fill	Low weight.....1	
		Moderate.....2	
		Over weight.....3	

QN	Question	Circle possible answers	Remarks
10	Do you know about vitamin, protein, minerals and carbohydrate?	Yes.....1	
		No.....2	

QN	Question	Circle possible answers	Remarks
11	How many times your family takes food a day?	One time.....1	
		Two times.....2	
		Three times.....3	

		Four times.....4	
		More than four times.....5	

QN	Question	Circle possible answers	Remarks
12	Do you give Tiffin to child at school?	Yes.....1 No.....2	

QN	Question	Circle possible answers	Remarks
13	If yes, who provides that Tiffin?	Self.....1 School gives.....2 .....Project gives.....3 Four times.....4 Other (specify).....5	

QN	Question	Circle possible answers	Remarks
14	Do you take regular weight of pregnant women?	Yes.....1 No.....2	

QN	Question	Circle possible answers	Remarks
15	How many times a pregnant takes TT injection?	One time.....1 Two times.....2 More than two times.....3 No practice.....4	

QN	Question	Circle possible answers	Remarks
16	In your family, do the pregnant take iron tablet?	Yes.....1 No.....2	

QN	Question	Circle possible answers	Remarks
17	In your family, how many times do ANC of a pregnant woman?	One time.....1 Two times.....2 Three times.....3 Four times.....4 More than four times.....5 Do not do.....6	

QN	Question	Circle possible answers	Remarks
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18	In your family, where do you do/plan for delivery?	At home.....1	
		At home assisted by trained midwife.....2	
		Health institution.....3	
		NO any plan.....4	
		Others (specify).....5	

QN	Question	Circle possible answers	Remarks
19	From where do you bring water? (multiple answer)	Tap.....1	
		Well.....2	
		Tube Well.....3	
		River.....4	
		Main source.....5	
		Well (Inar).....6	
		Pond.....7	
		Rain water.....8	
		Others (specify).....9	
QN	Question	Circle possible answers	Remarks
20	How is the quality of water? (multiple answer)	Clean.....1	
		With clay (Dhamilo).....2	
		Iron contained.....3	
		Arsenic contained.....4	
		Lime contained.....5	
		Sulphur contained.....6	
		Others (specify).....7	

(QS 21-22 ask for Terai only)

QN	Question	Circle possible answers	Remarks
21	Do you have Tube Well installed?	Yes.....1	
		No.....2	

QN	Question	Circle possible answers	Remarks
22	If yes, mention...?	Year of installation (.. .....).1	
		Depth (in feet).....2	
		Who installed (name.....).3	
		How much water comes at one pouch (ML.....)4	

QN	Question	Circle possible answers	Remarks
23	Have examined	Yes.....1	

	Arsenic?	No.....2	
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QN	Question	Circle possible answers	Remarks
24	If yes, mention...?	Year of examination (.....).....1	
		Who did it (.....).....2	
		What is quantity (observe card ppb.....).....3	

QN	Question	Circle possible answers	Remarks
25	If has more than 50 ppb of arsenic, ways of removing?	Arsenic filter.....1	
		Other (specify) .....2	

QN	Question	Circle possible answers	Remarks
26	Time for one time water bringing?	Less than 15 minutes.. .....1	
		More than 15 minutes.....2	

QN	Question	Circle possible answers	Remarks
27	How many times do you bring water in a day?	One time.....1	
		Two times.....2	
		Three times.....3	
		Four times.....4	
		More than four times.....5	

QN	Question	Circle possible answers	Remarks
28	How many sources of water you have for drinking and other purposes?	Only one.....1	
		Two .....2	
		More than two.....3	
		Other (specify) .....4	

### Personal Hygiene

QN	Question	Circle possible answers	Remarks
1	How many times do your family bath in a day?	One time.....1	
		Once in two days.....2	
		Once a week.....3	
		Once in 15 days.....4	
		Once a month.....5	

		Seldom/Sometimes.....6	
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QN	Question	Circle possible answers	Remarks
2	How frequently you wash clothes?	One time.....1	
		Once in two days.....2	
		Once a week.....3	
		Once in 15 days.....4	
		Once a month.....5	
		Seldom/Sometimes.....6	

QN	Question	Circle possible answers	Remarks
3	What material do your family use while bath?	Rittha (forest fruit)....1	
		Soap.....2	
		Only water.....3	
		Other (specify) .....4	

QN	Question	Circle possible answers	Remarks
4	How frequently do you cut your nails?	Regular.....1	
		Seldom/sometimes.....2	
		Bite.....3	
		Other (specify) .....4	

#### Diarrhoea related

QN	Question	Circle possible answers	Remarks
1	In your opinion, what would be the cause of diarrhoea? (multiple answer)	Playing in dirty places.....1	
		Eating dirty food.....2	
		Eating previous day's food.....3	
		Dirty body.....4	
		Contaminated water.....5	
		Eating whatever avails.....6	
		Others (specify).....7	

QN	Question	Circle possible answers	Remarks
2	What do you feed to a diarrhoeal child? (multiple answer)	Liquid.....1	
		Breast milk.....2	
		Only water.....3	
		ORS/Jeewan Jal.....4	
		Medicine.....5	
		Take for treatment.....6	
		Nothing given.....7	
		Others (specify).....8	



QN	Question	Circle possible answers	Remarks
3	Where your children defecate?	Child is small, so anywhere.....1	
		Keeps Pad/Napkin.....2	
		Toilet.....3	
		Other (specify) .....4	

QN	Question	Circle possible answers	Remarks
4	Have you village/VDC declared Open Defecation Free (ODF)?	Yes.....1	
		No.....2	
		If yes from when (year.....)	

QN	Question	Circle possible answers	Remarks
5	What are the ways of preventing diarrhoea? (multiple answer)	Washing hands daily.....1	
		Safety of excreta.....2	
		Purification of drinking water.....3	
		Keep personal hygiene clean.....4	
		Manage household used properly.....5	

QN	Question	Circle possible answers	Remarks
6	What were childhood diseases before this project implemented? (multiple answer)	Had more diarrhoea.....1	
		Wasting.....2	
		Malnourished.....3	
		ARI.....4	
		Loss of appetite.....5	
		Expensed in treatment.....6	
		Could not play.....7	
		Others (specify).....8	

QN	Question	Circle possible answers	Remarks
7	What are childhood diseases after this project implemented? (multiple answer)	Reduced diarrhoea.....1	
		Reduced wasting.....2	
		Reduced malnourishment.....3	
		Reduced ARI.....4	
		Increased of appetite.....5	
		Reduced treatment expenditure.....6	
		Like better playing.....7	
		Others (specify).....8	

QN	Question	Circle possible answers	Remarks
8	In your opinion,	Before food.....1	

	when should wash hands? (multiple answer)	After defecation.....2	
		Before feeding to child.....3	
		After feeding to child.....4	
		Others (specify).....5	

QN	Question	Circle possible answers	Remarks
9	What do you understand by Safe Management of Wastages? (multiple answer)	Keep wastage in hole.....1	
		After Dirty water in sewage.....2	
		Burn wastage.....3	
		Throw wastage in far distance.....4	
		Others (specify).....5	

QN	Question	Circle possible answers	Remarks
10	In your opinion, how can we purify water? (multiple answer)	Boiling.....1	
		Filtration.....2	
		Thrilling (CHHANNE).....3	
		Bleaching/Chlorination.....4	
		Others (specify).....5	

### RWSSP-WN Related

QN	Question	Circle possible answers	Remarks
1	Do you know RWSSP-WN?	Yes.....1	
		No.....2	End interview

QN	Question	Circle possible answers	Remarks
2	If yes, since when it started to work in your locality?	Year (.....)	

QN	Question	Circle possible answers	Remarks
3	What does by RWSSP-WN? (multiple answer)	Promoted for proper hand washing .....1	
		Promoted safe disposal of excreta.....2	
		Promoted safe saving of water and purification..3	
		Promoted safe hygiene and sanitation.....4	
		Promoted safe disposal of household used.....5	
		Others (specify).....6	

QN	Question	Circle possible answers	Remarks
4	With whom RWSSP-WN	DDC.....1	
		VDC.....2	

	coordinates/works? (multiple answer)	Health institutions.....3	
		FCHVs.....4	
		WASH CC.....5	
		Others (specify).....6	

QN	Question	Circle possible answers	Remarks
5	What changes brought by RWSSP-WN? (multiple answer)	Promoted for toilet construction....1	
		Promoted for ODF.....2	
		Promoted for controlling diarrhoea.....3	
		Promoted for reduction of malnutrition.....4	
		Promoted for reduction of childhood diseases..5	
		Promoted trainings/skills.....6	
		Promoted for formation of different committees..7	
		Others (specify).....8	
		Nothing done.....9	

QN	Question	Circle possible answers	Reasons
6	In your opinion, what other activities would be better to be implemented by RWSSP-WN in future? (multiple answer)		

### Observation Checklist

SN	Situations	Issues of Toilet	Yes (n%)	No (n%)	Total (n%)
1		1. Water available			
		2. Soap is available			
		3. Seen excreta outside toilet			

		4. Water shield available 5. Clean slab 6. Seen Mosquito and fly 7. Separate pot for washing after defecation 8. Toilet brush 9. Detergent 10. Ash available 11. Bad smelling 12. Full of excreta in hole 13. Easy to use by children 14. Easy for disabled <b>15. <u>Household instruments</u></b> 16. The water pot has clot 17. Water pot is covered 18. Pots kept safe to children <b>19. <u>House particles are kept at:</u></b> 20. Anywhere 21. Pits 22. Collected in one place 23. Others 24. .... 25. .... <b>26. <u>Washing platform is:</u></b> 27. Well managed			
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		28. Haphazard			
		29. Pots drying stand			

## **FGD and KII Guidelines**

### **Leading opinions of the points discussed during Focus Group Discussion (FGD) and KII**

- 1 Knowledge on the Rural Water Supply and Sanitation Project (Since its implementation period)
- 2 When the project was launched
- 3 What activities were initiated
- 4 Why these activities had been initiated
- 5 What structures and organogram were made to work by this project
- 6 How do these structure and organogram work
- 7 What were the main priorities of this project?
- 8 What Physical assistance has given by this project
- 9 Do this project have formed WASH Coordination Committee (WASHCC) in the District and VDC level.
- 10 Why the Committee have been formed, what are the reasons
- 11 How is the water condition in this district and VDC
- 12 What was the water condition in the district/VDC before RWSSP-WN project
- 13 What sorts of health, hygiene and sanitation project have been implemented in the district/VDC
- 14 What are the benefits from these project and what are the harms
- 15 Who have been benefitted since 5 years back from the project (Elderly people, women, backward group...)
- 16 How the project has contributed to control diarrhoea (Explain pre and post project condition)
- 17 How the project has contributed to promote Hygiene and Sanitation (Explain pre and post project condition).
- 18 Is there any progress in constructing Toilets and its use
- 19 Contributions in assisting for Toilets (Rewards, assistance, counselling and reasons)
- 20 How the project has contributed to reduce maternal and child mortality (Explain pre and post project condition)
- 21 How the project has contributed to promote health and Nutrition
- 22 How the project has contributed to Schools
- 23 How the project has contributed to DDC and VDC
- 24 What recommendation you want to make to RWSSP-WN for future activities (list the activities)

## Roster Analysis Format

S.N	Problem	Years					
		2063/64	2064/65	2065/66	2066/67	2067/68	2068/69
1	Incidence of Diarrhoea (Number %)						
2	Child Morbidity (Number %)						
3	Child Mortality (Number %)						
4	Maternal Morbidity (Number %)						
5	Maternal Mortality (Number %)						

6	Major Causes of Diarrhoea-Items	1	
		2	
7	Major Causes of Child Morbidity -Items	1	
		2	
		3	
8	Major Causes of Child Mortality-Items	1	
9	Major Causes of Maternal Mortality-Items	1	
10	Major Causes of Maternal Morbidity-Items	1	
		2	
		3	
		4	