Post Open Defecation Free Zone Assessment of Gugauli Village Development Committee, Kapilvastu towards achieving Total Sanitation

by

Bashu Dev Pandey
PU Registration No.199910200026
iWRM 013-703

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Pokhara University

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Dedication

Dedicated to all WASH sector professionals who supporting the rural village people for improving their WASH service level

Abstract

Gugauli Village Development Committee (VDC) is one of the first Open Defecation Free Zone declared VDC (2010) in the Kapilvastu District with the support of Rural Water Supply and Sanitation Programme, Western Nepal (RWSSP-WN). At the time of ODF declaration, 1160 and 34 households had constructed temporary and permanent toilets respectively for ending open defecation within the VDC, of which all the temporary toilets were destroyed due to inundation which left VDC to slip back to open defecation. The study aimed to assess and evaluate the present Water Sanitation and Hygiene (WASH) condition of Gugauli VDC based on the individual Water Sanitation and Hygiene service level to achieve total sanitation. Various participatory tools like household interviews, focus group discussion and observation along with formal and informal discussion were carried out. The secondary data from updated Village Water Supply, Sanitation & Hygiene (VWASH) plan of VDC is also verified during field visit for analyzing study purpose.

Out of 1,789 household in the VDC only 567 (32 %) household upgraded their toilets to permanent one, 3 household have temporary toilet. It was found out that 68 % of total household in the VDC are back to open defecation at present. Five major indicators for total sanitation were assessed for the VDC, which revealed that very few households were found in the position to achieve total sanitized status. Technological and behavioral challenges were found to have played major roles in constructing toilets. The peoples' attitude like "*Beti behen toilet mein, aru purush log bahar bagiyen mein*" and "*Jamindar/Aguwa le ta Charpi banayena hami le kasari banune"* hinder them from using toilets. The study concludes that "More focus should be given on behavior change both during ODF movement and after ODF declaration", which is lagging in the context of Gugauli VDC. Ending open defecation is a first significant step to an entry point of changing behavior towards total sanitation. VDC/VWASHCC needs regular monitoring for the household toilet construction and implementation with high priority of updated VWASH plan with post ODF strategy for improving WASH service level.

The study also analyzed the statistical relationship using multiple regression analysis between major indicators in achieving total sanitation in Gugauli VDC. Of many sanitation indicators, use of toilet, personal cleanliness and cleanliness of inside and outside of households found to focus more as small changes on these indicators could have huge impacts on the total sanitation which seek deemed importance to declare "Total Sanitation". Within these main indicators also, different sub-indicators such as construction of toilets under Regular use of toilets need to be emphasized more. Similarly, hand washing with soap after defecation and before cooking and taking meals of many needs to be carefully looked on to. For cleanliness of inside household promotion of improved cooking stove is necessary.

Declaration

I hereby declare that this study entitled "**Post Open Defecation Free Zone Assessment of Gugauli Village Development Committee towards achieving Total Sanitation**" is based on my original research work. Related works on the topic by other researchers have been duly acknowledged. I owe all the liabilities relating to the accuracy and authenticity of the data and any other information included hereunder.

Signature:
Name of the Student: Bashu Dev Pandey
Date:

Recommendation

This is to certify that this thesis entitled "**Post Open Defecation Free Zone Assessment of Gugauli Village Development Committee towards achieving Total Sanitation**" prepared and submitted by Bashu Dev Pandey, in partial fulfilment of the requirements of the degree of Master of Science (M.Sc.) in Interdisciplinary Water Resource Management awarded by Pokhara University, has been completed under my supervision. I recommended the same for acceptance by Pokhara University.

Signature:
Name of the supervisor: Mr. Robert Dongol
Organization: Nepal Engineering College
Designation: Assistant Professor
Date:

Certificate

This thesis entitled "**Post Open Defecation Free Zone Assessment of Gugauli Village Development Committee towards achieving Total Sanitation**" prepared and submitted by **Bashu Dev Pandey**, has been examined by us and is accepted for the award of the degree of Master of Science (M.Sc.) in Interdisciplinary Water Resource Management by Pokhara University.

……..	……..	……..…….
Hari Prasad Pandey Senior Divisional Engineer	Signature	Date
Robert Dongol Assistant Professor (Supervisor)	……..	……..…….
	Signature	Date
Prof. Dr. Khem Raj Sharma Director, ***nec*** CPS Nepal Engineering College- Centre for Postgraduate Studies	……..	……..…….
	Signature	Date

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Abbreviations and Acronyms

CDR	Central Development Region
DDC	District Development Committee
DoLIDAR	Department of Local Infrastructure Development and Agriculture Roads
D-WASH-CC	District Water Supply, Sanitation and Hygiene Coordination Committee
DWSS	Department of Water Supply and Sewerage
EDR	Eastern Development Region
FWDR	Far Western Development Region
GESI	Gender Equity and Social Inclusion
lpcd	liters per capita per day
MoFALD	Ministry of Federal Affairs and Local Development
MoPPW	Ministry of Physical Planning and Works
MoUD	Ministry of Urban Development
M-WASH CC	Municipality Level Water Supply, Sanitation and Hygiene Coordination Committee
MWDR	Mid-Western Development Region
NMIP	National Management Information Project
NSHCC	National Sanitation and Hygiene Coordination Committee
NSHSC	National Sanitation and Hygiene Steering Committee
OD	Open Defecation
ODF	Open Defecation Free
QARQ	Quantity Accessibility Reliability and Quality
R-WASHCC	Regional Water Supply, Sanitation and Hygiene Coordination Committee
RWSSP -WN II	Rural Water Supply and Sanitation Project in Western Nepal Phase II
RVWRMP	Rural Village Water Resources Management Programme
SACOSAN	South Asian Conference on Sanitation
SHMP	Sanitation & Hygiene Master Plan
UN	United Nations
VDC	Village Development Committee
V-WASH-CC	VDC Level Water Supply, Sanitation and Hygiene Coordination Committee
WASH	Water Supply Sanitation & Hygiene
WCF	Ward Citizen Forum
WDR	Western Development Region
WECS	Water and Energy Commission Secretariat
WUMP	Water Use Master Plan
WUSC	Water Users and Sanitation Committees
W-WASH-CC	Ward Level Water Supply, Sanitation and Hygiene Coordination Committee

Chapter 1

Introduction

1.1 Background

Sanitation is basis of life. Safe life is only possible in improved sanitation. But too many people miss out this basic human need. Lack of access to safe and proper sanitation has a major effect on people's health. Poor health constrains development and poverty alleviation. Sanitation is the hygienic means of promoting health through prevention of human contact with the hazards of wastes. Sanitation is one of the major components which directly impact the living standard of people. There are many indicators of sanitized society but toilet is considered as one of the important ones. The systematic effort for sanitation promotion in Nepal dates back to the1980s 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 in Nepal. A stand-alone sanitation program started from 2009/10 mainly focusing on sanitation only. 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 (SHMP, 2011). In Nepal, around 62% households have got the facility of toilet. This indicates that 38 % of households have no access to toilets and defecate openly (JSR, 2014).

Sanitation coverage in Nepal has increased significantly between 2000 and 2011. Access to national sanitation coverage has increased significantly from 30% to 62% over the period of 11 years. Government of Nepal has a plan of achieving 80 % improved sanitation coverage by 2015 and 100 % by 2017 (SHMP, 2011). Although there has been good achievement in the sanitation and hygiene situation due to massive scaling up of Open Defecation Free (ODF) campaigns in the country, the main challenge remains to maintain and accelerate the present trend of achievement nationwide, across districts, ecological belts, rural and urban communities and all segments of people. However, an encouraging environment has been created on the front of localization of the Sanitation and Hygiene Master Plan 2011, launching of national and district sanitation conferences for wider advocacy and publicity, strengthening different level coordination committees and expanding ODF initiatives. In the context of Nepal, One zone, fifteen districts, seventeen municipalities, 1615 VDCs are officially declared as Open Defecation Free as of FY 2070/71 (NMIP/DWSS-2014).

1.2 Statement of the Problem

Routine assessment of Post ODF activities is crucial to maintain the VDC open defecation free or else there are high chances of the area being converted into open defecation in near future. WASH service level must be assessed routinely based on its indicators that are in general practice of Nepal to the exact service level achieved by the people. ODF declaration seems main priority for all concerned stakeholders but POST ODF activities and sustaining ODF seems silence. In ODF VDCs also it is important to find out how many percent of households slip back to or continue open defecation in communities previously declared ODF. On the other hand with increasing economic capacity of the

people within the ODF declared VDC tend to add additional facilities to basic latrines, such as washing and bathing facilities and piped water supply.

Gugauli VDC, in Kapilbastu District, was declared Open Defecation Free (ODF) Zone in 2010. The VDC has converted into partial open defecation zone i.e during preliminary field visit in the District, it was found in three VDCs namely Khurhuriya, Gugauli and Sisawa less than 50 % of the households use toilets. This situation as of December 2014, has motivated to carry out this research in the WASH sector in Gugauli VDC.

1.3 Research Questions

In the context of the aforementioned situation in the study area, the following research questions were formulated:

- What are the changes and achievement after ODF declaration in the study area?
- How has been the defined WASH service level working in general practice in the study area?
- How the various drivers and barrier, if any, play role in the promotion and demotion of sanitation and hygiene in the study area?
- Is the present status of the study area sustainable and meet the ODF indicators to achieve the total sanitation?

1.4 Research Objectives

The overall objective was to assess and evaluate the present WASH condition of Gugauli VDC based on the Water Sanitation and Hygiene (WASH) service level to achieve total sanitation.

The specific objectives were:

- To assess change brought out and achievement made after ODF declaration of the study area.
- To assess the present Water Supply, Sanitation and Hygiene (WASH) Service Levels in the study area.
- To assess barriers and drivers in order to promote or demote sanitation and hygiene in the study area.
- To evaluate the sustainability of Open Defecation Free and possibility of achieving total sanitation of the study area.

1.5 Significance of the Study

This study was particularly focused on the post ODF scenario of Gugauli VDC, Kapilvastu and the study is significant for addressing Terai specific challenges across Nepal. This study aimed to investigate the WASH status of the VDC and its trend towards achieving the total sanitation. The study was sought to be significant because:

- Documentation of the post ODF status of the VDC helps to identify the important areas for the improvement in the future.
- Factors identified for ineffectiveness in ODF zones can be used to address the issues of ODF.

1.6 Scope and limitation of study

The study covered the lower most unit of local government bodies i.e. one of the Village Development Committee among number of ODF declared VDCs. The study adapted the questionnaire of Sanitation and Hygiene Master Plan (SHMP) modified in the context of the study area and the purpose of the study.

The study assessed water quality issues; however, the water quality analysis was not done. Though the study is on WASH but more focused on total sanitation of VDC.

Chapter 2

Literature Review

2.1 Millennium Development Goals

The target 7C of Millennium Development Goals (MDGs) is to halve, by 2015, the proportion of people without sustainable access to safe drinking-water and basic sanitation. As per the status of 2014, the target set on water and sanitation sectors in line with MDGs, Nepal has achieved 83.59 % coverage in water supply and 70.28 % for the sanitation (NMIP/DWSS, 2014). By halving the proportion of the population without sustainable access to basic sanitation from 70 percent in 2000 to 29.72 percent in 2014, Nepal has successfully reached the Millennium Development Goal for sanitation. This means that 70.28 percent of Nepalese are now using an improved sanitation facility-an incredible achievement.

National Planning Commission (NPC, 2012) prepared a document of Millennium Development Goal focusing on sanitation facilities in the country. Actually it is a framework developed by the NPC to find out new ways which can support to achieve 100% national goal on sanitation by 2017. This means by the end of 2017, the country will have been in a status of ODF (NPC, 2012). Hence 2017 A.D. is the year for achieving our national commitment for "universal access to water and sanitation" in Nepal. Now we have only two years left to meet the national target.

2.2 Status of Water Sanitation and Hygiene (WASH) in Nepal

The basic water supply coverage has reached to 83.59 % and sanitation coverage to 70.28 % by 2014. The data shows that water supply coverage could not increase noticeably in 2014 which was 80.4 % in 2010. Sanitation coverage has increased from 43.0 % in 2010 to 70.28 % in 2014 with an increment of 27.28 % (NMIP/DWSS, 2014). The DWSS data also shows that gap between drinking water supply coverage and sanitation coverage at the national level is almost 13.31% reflecting negligence of sanitation and hygiene component in the Water, Sanitation and Hygiene (WASH) sector.

Geographically, the highest water supply coverage of 84.89 % is observed in the Hill and the lowest water supply coverage is 80.19 % in the Mountain. Similarly, the Hill has the highest coverage of 87.14 % and the Terai has the lowest coverage of 56.93 % in terms of sanitation **(**NMIP/DWSS, 2014) as shown in table 2.1. This signifies that sanitation is comparatively less prioritized sector and is not taken up equally across the entire country, may it be from east to west or from Terai to hills.

Table 2.1Water and Sanitation Coverage in Nepal

S.No	Development Regions	Water Supply Coverage (%)	Sanitation Coverage (%)
1	Eastern Development Region (EDR)	82.45	62.58
2	Central Development Region (CDR)	85.21	62.77
3	Western Development Region (WDR)	82.84	80.6
4	Mid-western Development Region (M-WDR)	80.92	86.29
5	Far Western Development Region (F-WDR)	84.68	78.19

(NMIP/DWSS, 2014)

2.2 Water Sanitation and Hygiene Service Level and Indicators

The three major sectors namely Water, Sanitation and Hygiene comprises WASH. For comprehensive assessment of WASH, these three sectors are assessed separately on the basis of various indicators belonging to these sectors. Rural Water Supply and Sanitation National Policy 2004 mentions about the basic service level for water by minimum standards of Quantity, Accessibility, Reliability, and Quality (QARQ) of the schemes as shown in table 2.2.

Table 2.2 Assessment of Water Service Level Indicators

Service Level	Average Fetching time (Minutes)	Quantity (LPCD)	Quality of Water	Reliability (Month/year)	Continuity (Hr/day)
Good (Level-1)	≤ 15	≥ 45	Good, No possibility of contamination	12	≥6
Acceptable or Moderate (Level-2)	>15≤ 30	≥ 25< 45	Moderate likely to be contaminated	≥11<12	≥5<6
Poor (Level-3)	>30 ≤ 45	≥ 15< 25	Poor, high chances of contamination	≥10<11	≥4<5
Very Poor (Level-4)	>45	< 15	Very Poor, contaminated and intolerable	<10	<4

(RVWRMP, 2011)

Rural Water Supply and Sanitation National Policy 2004, however, remains silence on sanitation hygiene service levels. This also reflects that the sanitation sector has been given less priority. Potter et al., (2011) has identified various indicators for measuring sanitation and hygiene service levels which is shown in tables 2.3 and 2.4.

Table 2.3 Sanitation Service Level Indicators Assessment

Service level	Accessibility	Use	Reliability (operations and maintenance)	Environmental protection
Improved	Each family dwelling in compound has one or more toilets; easy access for all family dwellings	Facilities used by all household members	Regular or routine service (including pit emptying) requiring minimal effort; evidence of care and cleaning of toilet	Non-problematic environmental impact; safe disposal and reuse of safe by products
Basic (Based on Country norm)	Concrete or impermeable slab at national-norm distance from household (per household or shared)	Facilities used by some household members	Unreliable service (including pit emptying) requiring high level of user effort; evidence of care and cleaning of toilet	Non-problematic environmental impact; safe disposal
Limited	Platform without impermeable slab separating faeces from users	No or little use	No service (e.g. no pit emptying); no evidence of cleaning or care for toilet	Significant environmental pollution, increasing with increased population density
No Service	No separation between user and faeces (e.g., open defecation)			

(Source: Potter et al., 2011 as cited by IRC, 2011)

Table 2.4 Hygiene Service Level Indicator Assessment

Effectiveness levels	Faecal containment and latrine use	Hand washing with soap/ substitute	Drinking water source and management
Highly Improved	- All household members use a latrine all the time - The latrine used separates users from faecal waste	Washing station in the household supplied by a household tap providing adequate water - Soap or substitute available and used at critical times	- Protected water sources always used - Collection vessel (if necessary) is regularly cleaned with soap or substitute - Water storage vessel (if necessary) is covered - Water is drawn in a safe manner
Improved	- All household members use a latrine most of the time. - The latrine used separates users from faecal waste - When there is no access to a latrine, faeces are generally buried	Washing station in the Household. - Soap or substitute available and used at critical times	- Protected water sources always used - Collection vessel (if necessary) is regularly cleaned with ash or soap - Water storage vessel (if necessary) is covered - Water is not drawn in a safe manner
Basic	- All or some household members use a latrine some or most of the time - When there is no access to a latrine, faeces are generally buried. - The latrine separates users from faecal waste	- Household or compound has a washing station with safe water storage - Soap or substitute available and used at critical times	- Protected water sources always used - Collection vessel (if necessary) is regularly cleaned with soap or substitute - Water storage vessel (if necessary) is uncovered AND/OR - Water is not drawn in a safe manner

Limited	- The latrine does not provide adequate faecal separation AND/OR - All/some family members generally do not bury faeces when not using a latrine AND/OR - All family members practice burying faeces	- Household or compound has a washing station with unprotected water storage AND/OR - No soap or substitute is available AND/OR is not used for hand washing	- Protected drinking water sources are not always used AND/OR - Collection vessel is not cleaned
No	Open defecation	Household members have no specific place to wash their hands and usually do not wash their hands after defecation	Unsafe sources mostly/always used to collect drinking water

(Source: Potter et al., 2011 as cited by IRC, 2011)

2.4 Open Defecation Free (ODF) Declaration Process

The Sanitation and Hygiene Master Plan, 2011 focuses on: a) establishment of a monitoring and evaluation system with different level WASH Coordination Committees, b) monitoring indicators compatible with WASH, health, education and local development sectors, c) integration of data and information with monitoring and evaluation unit at Ministry of Urban Development (MoUD), d) development of input, process, output, outcome and impact levels indicators, e) strengthening of documentation and reporting mechanism at the DDC, Municipality and VDC levels, f) mobilization of the monitoring team at VDC, Municipality, District, Regional and National levels, and g) declaration and validation of ODF/ post-ODF initiatives.

According to the Master Plan there is vertical linkage (Figure 2.1) among National Sanitation and Hygiene Steering Committee (NSHSC), National Sanitation and Hygiene Coordination Committee (NSHCC), Regional Water Supply, Sanitation and Hygiene Coordination Committee (R-WASHCC), District Water Supply, Sanitation and Hygiene Coordination Committee (D-WASH-CC), Municipality Level Water Supply, Sanitation and Hygiene Coordination Committee (M-WASH-CC), VDC Level Water Supply, Sanitation and Hygiene Coordination Committee (V-WASH-CC) and Ward Level Water Supply, Sanitation and Hygiene Coordination Committee (W-WASH-CC) for monitoring ODF/Post ODF initiatives.

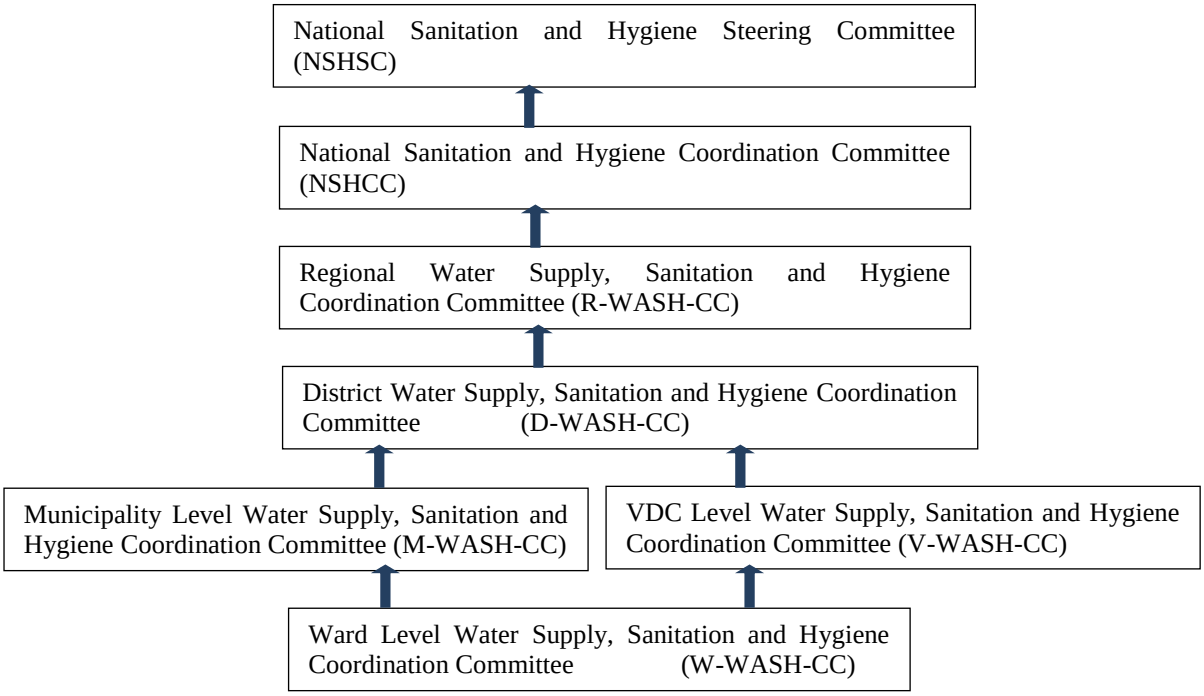


Figure 2.1Vertical Linkages among Different Level WASH Coordination Committees

2.5 Indicators for Sustainable ODF

Open Defecation (OD) means defecting in the open and leaving the feces exposed. ODF means Open Defecation Free i.e. no feces are openly exposed to the air. The collection of feces in a direct pit with no lid is also a form of OD but with a fly proof lid covering it

then qualifies for ODF. The following indicators/ criteria are expected to be prevalent in any given designated areas in order to declare it ODF:-

- There should not be Open Defecation in the designated area at any given time;
- All households have access to improved sanitation facilities (toilets) with full use, operation and maintenance; and
- All the schools, institutions or offices within the designated areas must have toilet facilities.

In addition, the following aspects should be encouraged along with ODF declaration process:

- Availability of soap and soap case for hand washing in all households; and
- General environmental cleanliness including management of animal, solid and liquid wastes is prevalent in the designated area.

2.6 Total Sanitation and its indicator

"*True ODF is the foundation of Post ODF phase and basis for Total Sanitation*" (RWSSP-WN II, 2015) as shown in figure 2.2. In Nepal the concept of total sanitation has been introduced as a continuation of ODF movement. This includes five plus one (5+1) indicators. Five indicators are households centered which include: use of toilet, use of safe water, use of safe food, practice of hand washing and practice of cleaning the house and surroundings (SHMP 2011). The other indicator is related to environmental cleanliness which includes numbers of sub-indicators to be fixed by communities themselves considering their local conditions and requirements.

Figure 2.2 Process towards achieving Total Sanitation

The Global Scaling Up Rural Sanitation Project considers a community to have achieved Total Sanitation (with underlying assumptions was that people move up the sanitation and hygiene ladder in steps and goals 3,4,and 5 should be pursued only after the first two have been reached) when:

1. All households have stopped Open Defecation.
2. All households own and use improved (safe/hygienic) latrines for all excreta disposal, and maintain their facilities hygienically.
3. All households regularly wash their hands with soap after defecation and cleaning up infant feces, and before eating, feeding and handling food.
4. All households handle and store food and drinking water safely
5. All households use safe practices for managing domestic solid and liquid waste.

(Mukherjee, 2012)

2.7 Problems related to Post Open Defecation Free

Problems related to post ODF mainly seen on sustaining ODF and fulfilling the indicators related to total sanitation. Problems could be seen on basically two aspects

- Hardware related to Technological problems
- Software related to Behavior Problems

Technological problems related to hardware i.e. types of toilets constructed during declaration of ODF. If there is permanent structure up to plinth level of toilets constructed, than some the problem related to sustainability is reduced.

Behavioral problems are related to regular use of toilets. This is very time consuming and depends on culture and place. Once the behavior changed than ODF is sustained as well as indicators of post ODF. So without changing the behavior the sustaining of ODF is difficult.

Proper planning for sustainability as well as post ODF activities, challenging nature of middle income level people, awareness creation and behavioral change rather than financial supports, proper mobilization of schools, adequate technical assistance for school toilet construction in conjunction with software activities for awareness creation or behavioral changes, mobilization of students for school sanitation management, proper monitoring mechanisms are the key points to be considered for sustainability of ODF. Post ODF provisions should be clearly defined and especially focused and supported with continuation of awareness activities, Local governments should play active roles for the sustainability of ODF and Participatory Approach of the program should be applied for better achievements (Sah, 2013).

Proper planning, technical assistance, and participatory approach play the vital for ODF sustainability. Similarly, post ODF provisions should be clearly defined, which should include the continuation of awareness programmes among local people. There are many temporary toilets in the rural areas of Nepal. Such toilets collapse easily in wet seasons. Then people go to open defecation. But the people having permanent type of toilets hardly go back to the open defecation. This indicates that the sustainability of ODF depends on the types of technology used in the toilets. Technical documents are lacking on sustainability of ODF in Nepal (Dahal et al., 2014).

Regular monitoring mechanism and provision of reward and punishment should be established for the ODF sustainability. If somebody violates ODF, he/she should be excluded from the society and social service from the local administrative bodies. Educational institutions/ schools should be properly mobilized for awareness creation and behavior modification. Financial support to ultra-poor people should be available in conjunction with awareness creation (Dahal et al., 2014).

One of the Key findings of Water and Sanitation Program Indonesia Action Research Report is that “once verified communities declared as ODF are not being re-checked by local government agencies for sustainability of behavior change” (Mukherjee, 2012).

Chapter 3

Methodology

3.1 Study Area

Gugauli Village Development Committee as shown in figure 3.1 is situated in the West South of Kapilvastu District.

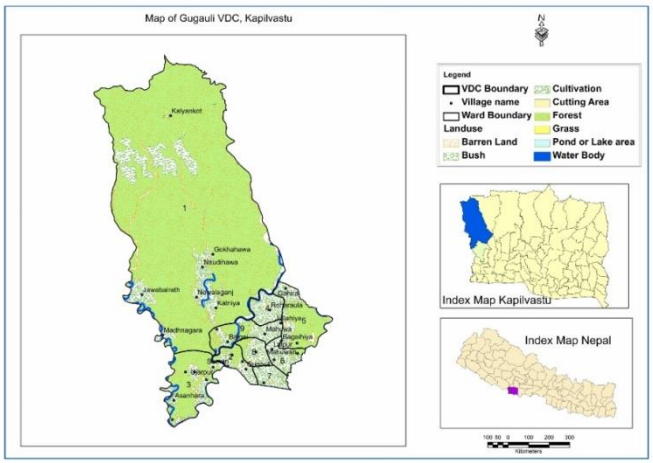


Figure 3.1 Map of Gugauli VDC

Gugauli VDC is one of the first ODF declared VDC in the Kapilvastu District, with 1,160 households have temporary toilets and 34 households have permanent toilets. All the institutions/schools have toilets and no open defecation is practiced in the VDC till the temporary toilets works properly. Now the VDC is turned into Open Defecation practiced VDC with 567 households have permanent toilets and 3 households have temporary toilets out of total 1,789 households (VWASH PLan, 2015).

3.1.1 Household and Caste wise Information of Gugauli VDC

There are total 1,789 households in the VDC. Dalit, Adibasi/Janjati, Religious Minorities (Muslims), Terai Disadvantaged Group (DAG) and other caste people live in the VDC as shown in table 3.1 below.

Table 3.1 Households and Caste-wise Information of VDC

Ward No	HH Caste					
	Dalit	Adibasi/Janjati	Religious Minorities	Terai DAG	Other	Total
1	64	257	7	32	86	446
2	56		11	110	8	185
3	30	149		6	20	205
4	2	251		3		256
5	17	94	44	38	2	195
6	60	28	14	35	45	182
7	13	1	7	60	7	88
8	11			40	39	90
9	13	9	50	63	7	142
Total	266	789	133	387	214	1789

(VWASH PLan, 2015)

3.1.2 School and Institutional Toilets

In this VDC all school and institutions have toilet facility with some of them have user friendly toilet as shown in table 3.2 below

Table 3.2 School and Institutional Toilet Status

S.N.	School and Institutions Name	Toilet (Y/N)	Use of Toilet (Y/N)	Water Facility (Y/N)	Gender Friendly (Y/N)	Differently able friendly (Y/N)
1	Dudhadhari Secondary School	Y	Y	Y	Y	Y
2	VDC Office	Y	Y			
3	Health Post Office	Y	Y	Y	Y	Y
4	Dudhadhari Temple	Y	Y	Y	Y	Y
5	Sri Janjagriti L.S.	Y	Y	Y	N	N
6	Madarsa-5	Y	Y	N	Y	N
7	Sri Shanti Primary School	Y	Y	N	Y	N
8	Sri Nepal Tara L.S	Y	Y	Y	Y	Y
9	Ilaka Police Post-6	Y	Y	Y	N	N
10	Madarsa-9	Y	Y	Y	Y	N
11	Bal Bikash Kendra	Y	Y	Y	N	N
12	Sri Mankamana P.S.	Y	Y	N	Y	N
13	Sri Newalajung P.S.	Y	Y	N	Y	N
14	Sri Janchetana P.S	Y	Y	N	Y	N

(VWASH Plan, 2015)

3.2 Research Design

This is an analytic type of research which is concerned with the approach to total sanitation. The study analyses the post ODF scenario as well as WASH service level in the VDC. Participatory tools and methods such as household questionnaire survey, door to door visit, Focus Group Discussion along empirical field studies were done to collect data from the field. The detail tasks break down structure showing set of activities covered in each phase is presented below in figure 3.2 below

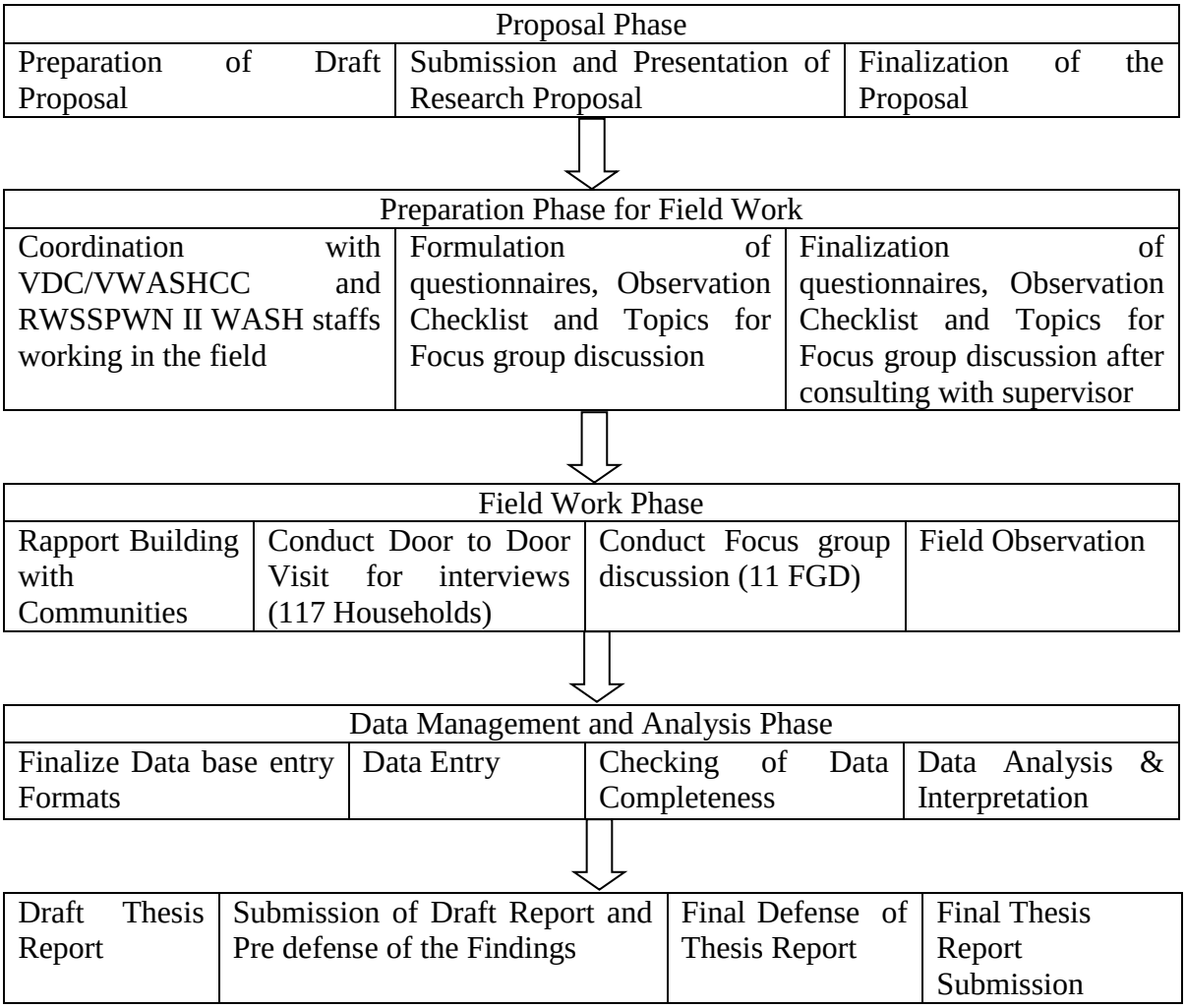


Figure 3.2 Methodological Framework

3.3 Research Approach

The research adopted a qualitative as well as quantitative approach.

The Inventory of water resources and other relevant local resources and the existing water related infrastructure/ facilities and socio-economic data were collected from the concerned VDC WASH Plan. Primary data were collected during the field visit of the selected ward and during the meeting with Ward Citizen Forum. Relevant study reports, publications and maps were collected from the DDC and RWSSPWN II working in the VDC.

3.4 Primary Data Collection

3.4.1 Household Survey

A set of questionnaires was prepared and directly administered to the Households. The questionnaire contained the questions mainly focused on the activities conducted after

ODF declaration. The questionnaire was prepared based on Sanitation and Hygiene Master Plan and those related to WASH service level.

i. Sample Size

The sample size, for the given universe of 1,789 households, was estimated using equation (i) based on some basic assumptions like (Yamane, 1967):

$$n = N/(1+N e^2) \text{ ……………………………………(i)}$$

where,
n = Sample Size
N = Population
e = Margin of error

Confidence level or the measure of reliability as 95 % or the significance level 5%.
Degree of accuracy as 91% or the margin of error as 9 %
Variability as moderate

The sample size is derived for the above conditions; n= 117 nos.

The derived sample size was verified with the sample advisor table (CRS, n.d.).

ii. Sampling Unit and Method

The sampling unit for the study was the household. While conducting the study in the VDC, total households of nine wards constituted the study universe. The total number of samples determined by equation (i) was divided in each ward based on representative distribution principle with that of the ward households as shown in table 3.3. In each ward samples were selected in a systematic way for which sampling class intervals were determined by dividing the total number of households of the ward by the total number of samples required as shown in equation (ii).

Sampling Class Interval = (Total Number of Households in a Ward/Total Number of Samples required from the ward) ………….. ii

Table 3.3 Number of Household Samples Distributions across the Wards

Ward No	Total Households	Sample Household surveyed/Interviewed	Sample Interval
1	446	29	15
k2	185	12	15
3	205	13	16
4	256	17	15
5	195	13	15
6	182	12	15
7	88	6	15
8	90	6	15
9	142	9	16
Total	1789	117	

A total of 117 households owners in all 9 wards of VDCs were visited and interviewed with the help of semi-structured questionnaire (Annex 1). A total 117 household owners name list from all nine wards is kept in (Annex 2) 108 household owners were male headed and 9 household were female headed respondents participated in the household interview.

3.4.2 Households Sanitary Situation Observation

During the study period, observation of each household for the sanitary situation was carried-out simultaneously with household survey. Observation was based on checklist (Annex 3) developed by Government of Nepal Sanitation and Hygiene Master Plan, 2011 for total sanitation indicators. The observation focused mainly on use of toilets, personal cleanliness, use of safe water, use of safe food and cleaning of inside and outside household. This helped validation and cross check of data gathered from household's interview.

3.4.3 Focus Group Discussion

Un-structured checklist was used to facilitate Focus Group Discussion (FGD) in the VDC. Aiming of at least one FGD in each ward, a total of 11 mixed (male/female) FGD were conducted in nine wards. Total of 120 Male and 53 female had participated during FGD conducted in all wards. FGD was conducted with an aim to know WASH, open defecation free as well as analyze driver & barrier, and changes & achievement for total sanitation and then triangulate the data that have been collected from the household interviews. A checklist (Annex 4) was taken as a reference, which was followed by several probing questions during the discussion. The name list FGD participants were kept in (Annex 5)

3.5 Secondary Data Collection

Relevant books, articles, journals, projects reports, guidelines were reviewed for necessary information. Data from VDC, projects working in WASH sector RWSSP-WN II and information collected from the literature review of both published and unpublished literatures were used as the secondary information for the analysis and interpretation. Literature review was done throughout the research period for upgrading information on others' experiences and various methodologies followed elsewhere.

Water supply service level of whole VDC was taken from VWASH Plan of Gugauli VDC, which was recently updated with the support of bilateral project (government of Finland and Government of Nepal) named Rural Water supply and Sanitation Project, Western Nepal, Phase Second. For the validation of that water supply service level it was also discussed during FGD.

3.6 Data Analysis

A proper and fair recording of the data and information was done. Microsoft excel were used to analyze the primary data regarding the total sanitation indicator fulfillment in yes/no format answering collected from field. Qualitative information gathered from the

interviews and FGD was translated into English and extracted the required information for triangulation and validation of the data.

The report presents the findings through statistical quantitative and semi quantitative data. The qualitative information was presented in descriptive forms. Photographs have also been placed and presented in the report as deemed relevant. To analyze the post open defecation free status of the VDC towards the total sanitation five main indicators such as i. Regular use of Toilet ii. Personal Cleanliness iii. Access and use of minimum required safe water iv. Use of safe food and v. Cleanliness of inside and outside households, were defined and the corresponding sub indicators contributing to these main indicators were analyzed. Those household fulfilling the all five main indicator is recommended for Total Sanitation Declaration and for others possible barriers were identified towards total sanitation. Table 3.4 below shows format for sample household sanitation status with the detailed households documented is provided in annex 2.

Table 3.4 Format for Total Sanitation Status at household level

S. N	House Owner's Name	Regular Use of Toilet Yes (1)/No (0)	Personal Cleanliness Yes (1)/No (0)	Access and Use of Minimum Required Safe Water Yes (1)/No (0)	Use of Safe Food Yes (1)/No (0)	Cleanliness of Inside and Outside of Households Yes (1)/No (0)	Is Ready for Total Sanitation Declaration? Yes (1)/No (0)

Water Sanitation and Hygiene service level was determined by the benefits that household receive and measured by the combination of criteria as mentioned in tables 2.2, 2.3 and 2.4 (sub section 2.2). The household water service level was determined by the lowest level of service on any four service criteria: i. Quality, ii. Accessibility, iii. Reliability and iv. Quantity. Similarly the household sanitation service level was decided by the lowest level of service received on one of the four service criteria- i. Accessibility, ii. Use, iii. Reliability and iv. Environmental Protection (Potter et al., 2011). In the same way household hygiene service level was determined by the lowest level of service on any of the three service criteria- i. Faecal containment and latrine use, ii. Hand-washing with soap and iii. Drinking water source and management.

Chapter 4

RESULTS AND DISCUSSION

4.1 Open Defecation Free Initiatives in Gugauli Village Development Committee

Gugauli VDC stands as the first ODF declared VDC (June 21, 2010) within Kapilvastu District. It was declared ODF VDC even before Sanitation and Hygiene Master Plan, which was commenced in 2011. The systematic effort for sanitation promotion in Gugauli VDC dates back to 2008 but promotion of sanitation has been accelerated after the intervention of Rural Water Supply and Sanitation Project Western Nepal (RWSSP-WN) with the support of which the VDC was declared ODF after awareness programme on sanitation and various capacity building activities conducted by the project leading the construction of toilets in every household of the VDC. At the time of ODF declaration 1,520 and 34 households constructed temporary and permanent toilets (Annex 6) respectively (RWSSP-WN II, 2015). The figure 4.1 below shows the ODF declaration process of VDC followed by VDC. The adopted procedures for the declaration at that time was similar to the present ODF declaration procedures as explained under sub section 2.4 (Figure 2.1).

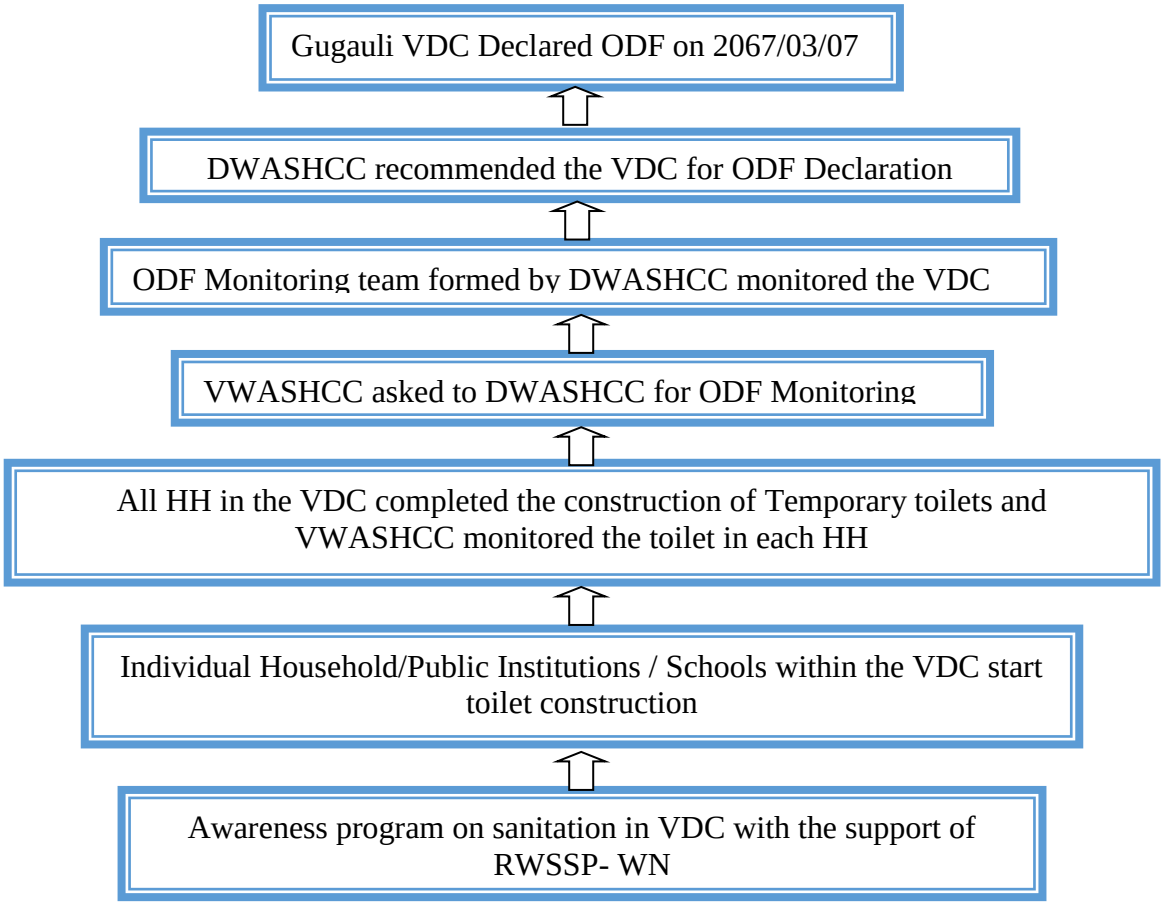


Figure 4.1 Open Defecation Free (ODF) Declaration Process of Gugauli VDC

4.2 Post ODF Status of Gugauli Village Development Committee

It's been five year since the VDC was declared ODF. Coming down the path, the VDC has not gradually turning into open defecation as 53% of sampled households were found practicing open defecation after their temporary toilets flooded or filled or damaged. The construction and regular use of toilets by people in the area is the first step towards total sanitation. The present scenario of VDC after ODF declaration is shown in figure 4.2 below. Of various indicators to achieve total sanitation, people were found not using toilets regularly in the VDC, which is more prominent in Ward number 5 (only 8 % toilet usage). Ward number 6 has recorded the highest percentage of toilets usage (92 % toilet use regularly) (Field Survey, 2015).

Similarly personal cleanliness is found very low in ward no 1 (28 %) and very high in ward no 7 (100 %), access and use of minimum required safe water is found low in ward no 5 (46 %) and high in ward no 2, 7 & 8 (100%), Use of safe food is found poor in ward no 3, 5 & 6 (92 %) and good in ward no 1,2,4,7,8 & 9 (100%), cleanliness of inside and outside of households is found very poor in ward no 8 & 9 (i.e. nil percent) and good in ward no 3 & 6 (92%).

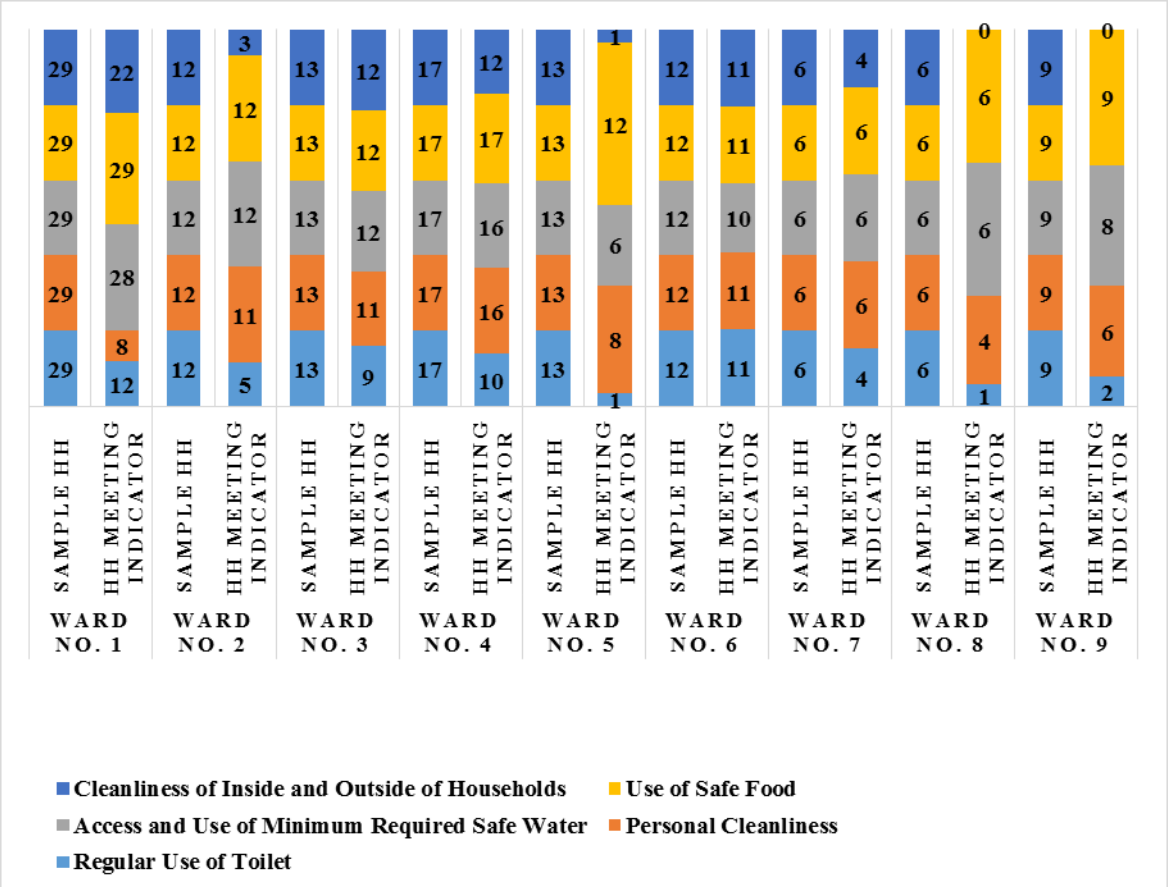


Figure 4.2 Post ODF Status of Gugauli VDC

4.3 Present Water Supply Sanitation and Hygiene (WASH) Service levels

4.3.1 Water Supply Service Level

Water supply service level of all nine wards is presented in figure 4.3 below. Based on the Water service level proposed by Rural Water Supply and Sanitation Policy, 2004, the present water service level in the study area was assessed. It was found that the percentage of household falling under service level one (Good) is highest in ward no 2 & 4 i.e. 70 % and lowest in ward no 1, 3 & 8 i.e. 50 %. Similarly 21 % of the sampled households fall under service level two (Average) in ward no 8 & 9 and lowest in ward no 1 (12 %), households under service level three was found highest in ward no 1 (25 %) and lowest in ward no 4 (5 %), and service level four was found highest in ward no 3 (16%) and lowest in ward no 6 (4%) (V-WASH Plan, 2015).

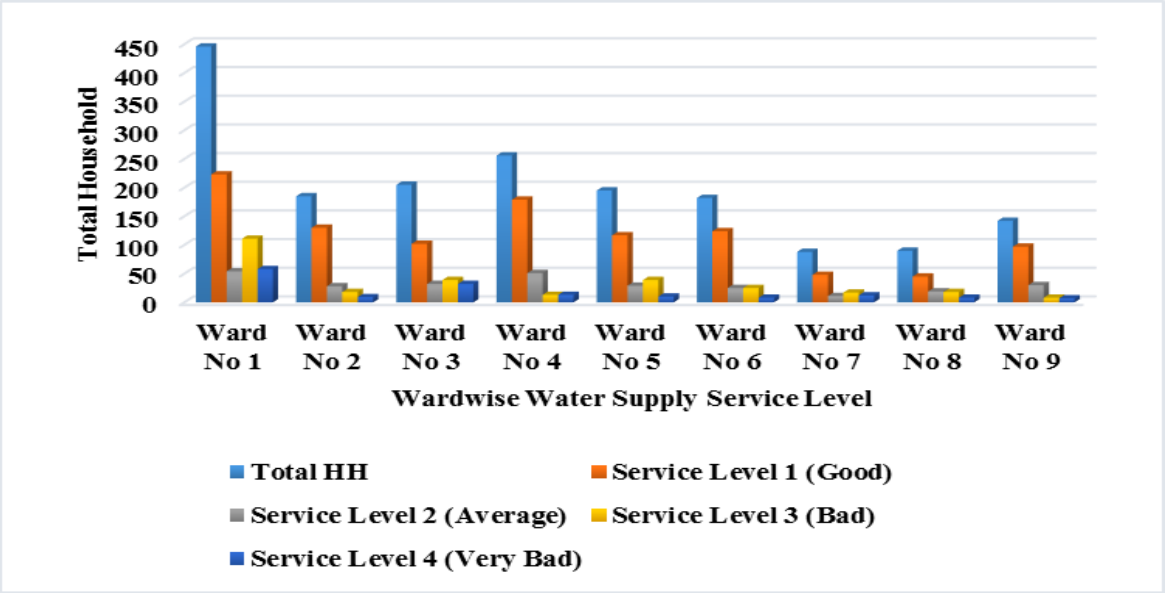
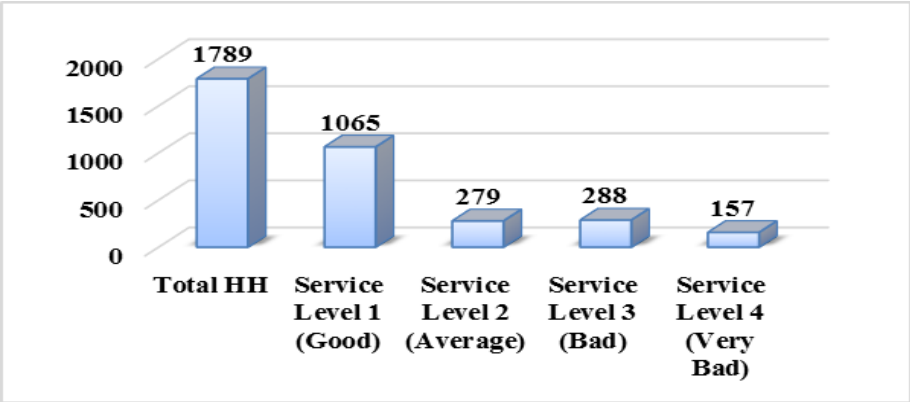


Figure 4.3 Water Service Level at ward level of Gugauli VDC

Out of 1,789 household in the VDC 1,065 household had water service level 1; 279 household had water service level 2; 288 household had water service level 3 and 157 household had water service level 4 as shown in figure 4.4 below:



(Source: VWASH Plan, 2015)

Figure 4.4 Water Service Level at VDC

4.3.2 Sanitation Service Level

Potter et al., as cited by IRC, 2011, categorized service levels into four categories based on accessibility, use, reliability and environmental protection of the area into Improved, Basic, limited and No Service. Sanitation service level was assessed accordingly and is shown in figure 4.5 below. It shows that sanitation service level 1(improved) is highest in ward 3 (73 %) as the present toilet structure is of permanent in nature that fulfilled all the criterion set for Improved sanitation service and lowest in ward 2 (5%). Similarly no ward had sanitation service level 2 (Basic), only 2% in ward no 2 had sanitation service level 3 (Limited) and Most of the household belongs to sanitation service level 4 (No service) i.e. highest in ward no 9 (93%) and lowest in ward no 3 (27%) due to lack of toilets.

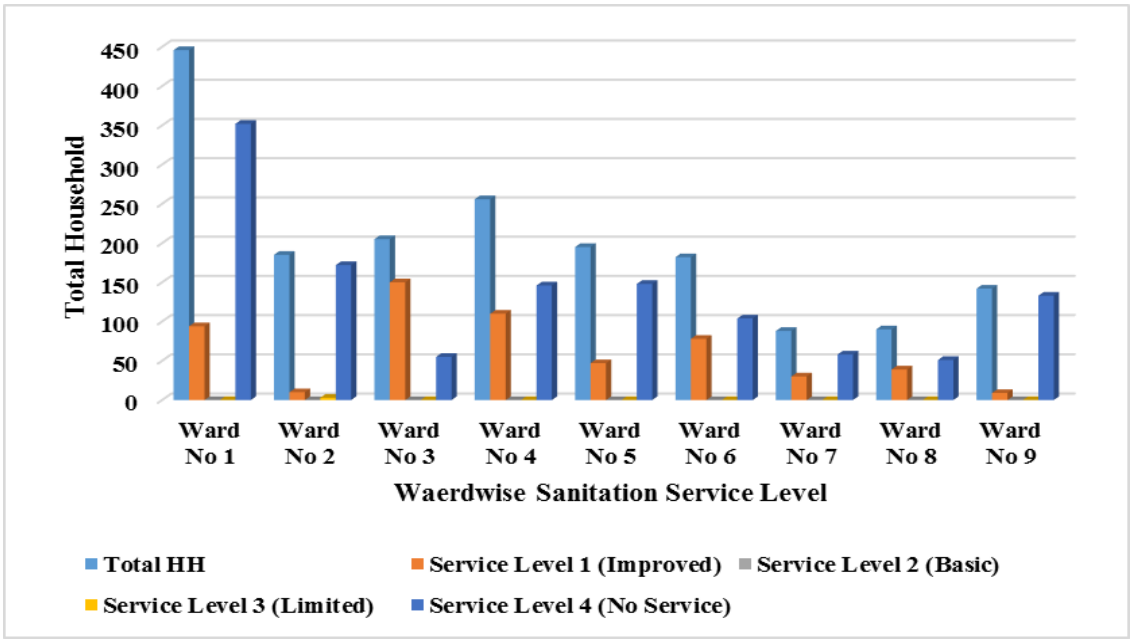


Figure 4.5 Ward wise Sanitation Service level

In total the whole VDC sanitation level can be described as shown in figure 4.6 alongside. Out of 1,789 household 567 household had sanitation service level 1, 3 household had sanitation service level 3 and 1,219 household had sanitation service level 4 (Field Survey, 2015).

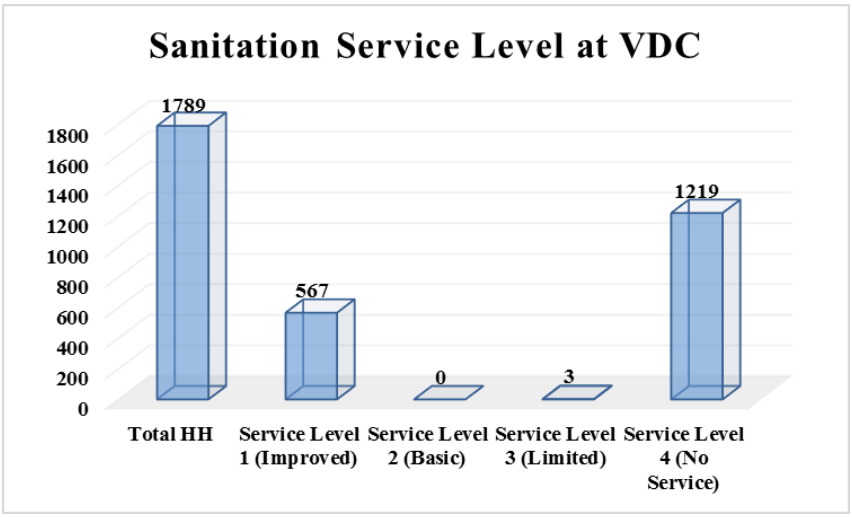


Figure 4.6 Sanitation Service level at VDC

In percentage 32 % household had improved sanitation, and 68 % household had no service of sanitation.

4.3.3 Hygiene Service Level

Ward wise hygiene service level is assessed in sampled household only and shown in figure 4.7 below. The hygiene service level 1 (Highly improved) is found highest in ward no 6 (83%) and lowest in ward no 5 (8%), no household belongs to service level 2, 3 and 4 in all wards. The hygiene service level 5 (No service) is highest in ward no 5 (92%) and lowest in ward no 6 (17%).

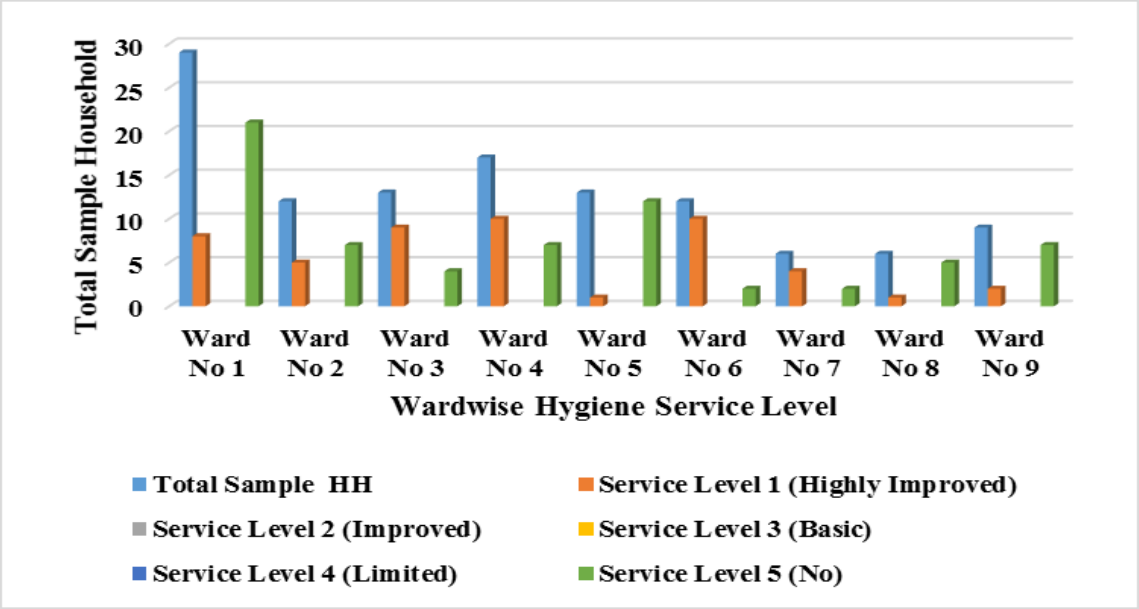


Figure 4.7 Ward wise Hygiene Service Level of VDC

Hygiene service level of VDC is shown in figure 4.8 alongside. Out of 117 sample household surveyed it was found 50 households have hygiene service level 1(Highly improved) and 67 households have hygiene service level 5 (No service) (Field Survey, 2015). The reason behind not having hygiene services is the lack of toilets.

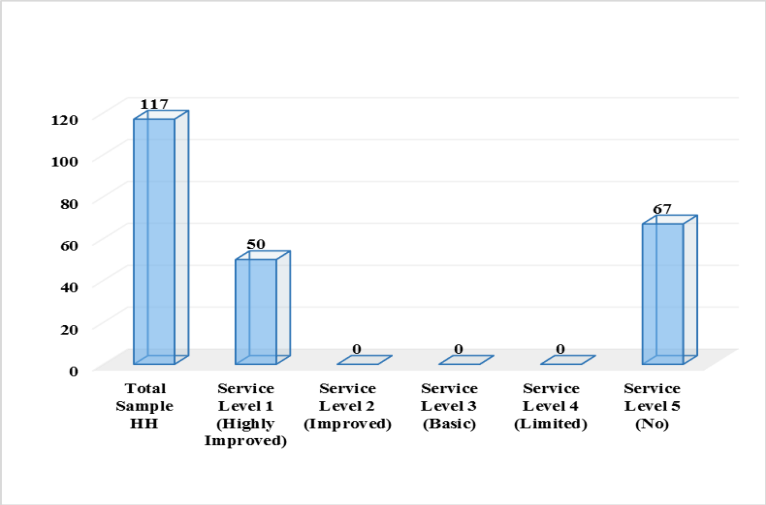


Figure 4.8 Hygiene Service level of VDC

4.4 Changes and Achievement made after ODF Declaration in VDC

Changes brought and achievement made on Water, Sanitation and Hygiene sector after ODF declaration of VDC are discussed in following ways (FGD, 2015):

- 60% of total households in VDC are benefitted from water service level 1 (Good) and demanding for other households water service level improvement. For this, VDC has played an important role and had prepared VWASH plan and updated it recently.
- Temporary toilets were constructed by each household for the ODF declaration of the VDC but couldn't sustain the ODF. For sustaining the ODF, now 567 household (32 % of total) had permanent toilet at least up to plinth level (pan level) and are able to keep them in improved sanitation (service level 1).
- People in the VDC are aware on improving their hygiene level found 43% of sample household receiving the benefit of highly improved (Hygiene service level 1) hygiene service. People of study area found aware on how to bring those who were still receiving no (hygiene service level 5) hygiene benefit mainly doing open defecation.
- People, who are still practicing OD (after ODF) goes far away to defecate from house, foot trails, road, public places etc.
- All are aware of VDC declared ODF and nobody is allowed to open defecate within the boundary of VDC though they are practicing open defecation.

4.5 Drivers and Barriers towards Total Sanitation Declaration

4.5.1 Drivers for Total Sanitation

At least 32 % percent of total household in the VDC had constructed the permanent toilets and they are using the toilets regularly. 69 % of sampled household member had maintain personal cleanliness, 89% had access and use of minimum required safe water, 97 % use safe food for consumption and 56 % had maintain the cleanliness of inside and outside of household.

VDC/VWASHCC is actively working/following the construction of toilet and decided to stop the recommendation from VDC those who have not toilet in house. Also in ward W-WASH CC responsibility is given to Ward citizen forum (WCF) by V-WASH-CC and mobilized in ward level for WASH activities.

4.5.2 Barriers for Total Sanitation

Still the VDC is facing the problem of open defecation i.e. 1219 household which is 68 % of total household have no toilet in their house at present. Previously constructed temporary toilets for declaring ODF VDC in 2010 are now damaged and left. Since toilet construction is the first step towards the total sanitation. So not having the toilet at household is the main barrier towards achieving the total sanitized VDC.

31 % of surveyed household showed that they were unable to maintain personal cleanliness, 11 % had not access and use of safe minimum required safe water, 3 % were unable to use safe food and 44 % had not maintain cleanliness of inside and outside of household.
People are still waiting for subsidy from government/VDC to construct toilets. During FGD, immigrants from hilly regions told that few people in the study area blame them in receiving some sort of funds (or subsidies) from VDC/Government to construct toilets. Mostly native people household, elite people lack toilets as quoted "*Jamindar/Aguwa le ta*

Charpi banayena hami le kasari banune", which is also one of the barrier for achieving ODF zone. Attitudes of not having land, money and interest for toilet construction are also the barrier for achieving Total sanitation. Non-availability of sanitation materials nearby for toilet construction, lack of accurate information about toilet design and cost and inability to benefits perception of the toilets are barriers to sanitation behavior change. Destruction of toilets constructed due to floods during monsoon prior to ODF declaration in 2010 was also seen as one of the challenges associated with declaration of total sanitation in the study area as people are seen reluctant to construct toilets again.

4.6 Achievement of VDC towards Total Sanitation

Under this section, the present total sanitation scenario of Gugauli VDC is presented along with the analysis of statistical relationship between major five total sanitation indicators on achieving total sanitation.

4.6.1 Present Total Sanitation Status

Household ready for total sanitation declaration and so on achievement of VDC towards total sanitation is analyzed in major five indicators fulfilled, each having sub indicators as shown in table 4.1 below. Based on these sub indicators, these 5 main indicators were analyzed and found as:

- Of sampled 117 households, only 55 households were found using toilet regularly, 81 households are maintaining personal hygiene, 104 households have access to use of minimum required safe water, 114 household were found using safe food for consumption and 65 household have cleanliness of their homestead.
- But only 30 households fulfilled all these five total sanitation indicators and hence only 30 household out of sample 117 household is ready for Total sanitation declaration.

The figure 4.9 below shows the total sanitation status of VDC.

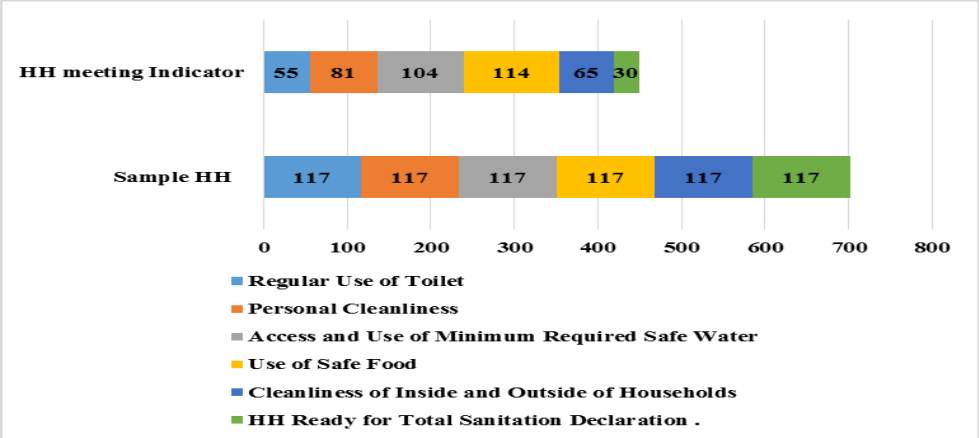


Figure 4.9 Total Sanitation status of Gugauli VDC

4.6.2 Relationship Between Indicators for Achieving Total Sanitation

The study also analyzed the relationship between major indicators in achieving total sanitation in the study area. A multiple regression analysis was performed with the help of

MS-Office (Excel) at 95 % significance level and 5 % standard error. The R squared and adjusted R squared values along with regression coefficient, p value and standard errors are shown in tables 4.9 & 4.10 below.

Table 4.1 Regression Statistics

Regression Statistics	
R Square	0.58
Adjusted R Square	0.57
Standard Error	0.29
Observations	117

Table 4.2 Statistical Relationship between Indicators and Total Sanitation

	Coefficients	*Standard Error*	*P-value*
Regular Use of Toilet	0.37	0.063	0.000
Personal Cleanliness	0.20	0.066	0.002
Access and Use of Minimum Required Safe Water	0.02	0.092	0.771
Use of Safe Food	0.02	0.179	0.854
Cleanliness of Inside and Outside of Households	0.38	0.056	0.000

Of many sanitation indicators, three indicators such as regular use of toilet, personal cleanliness and cleanliness of inside and outside of households found to have more importance that the rest two indicators (based on p-values as shown in table 4.10), which indicates that a small changes on these indicators could have huge impacts on the total sanitation (as shown by coefficients of each indicators in table 4.10). The regression equation (as shown in figure 4.10) of dependent variable Total Sanitation on independent variable of its indicators can be written as:-

Household Ready for Total sanitation Declaration = 37 % of Regular Use of Toilet + 20% of Personal Cleanliness + 2% of Access and Use of Safe water + 2% of Safe food Use + 38% of Cleanliness Household inside and Outside

More focus needs to be on Regular Use of toilet, personal cleanliness and cleanliness of household inside and outside by individual household member to declare "Total Sanitation" of the VDC. Within these main indicators also, different sub-indicators such as construction of toilets under Regular use of toilets need to be emphasized more. Similarly, hand washing with soap after defecation and before cooking and taking meals of many needs to be carefully looked on to. For cleanliness of inside household promotion of improved cooking stove is necessary.

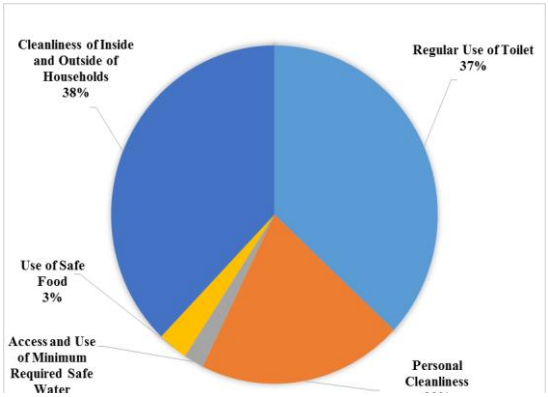


Figure 4.13 Percentage dependency of Total Sanitation on its indicators

Table 4.3 Household Ready for Total Sanitation out of 117 sample household

Main Indicator		Sub Indicator	HH Meeting Sub indicator	HH meeting Main Indicator	HH Ready for TS
1. Regular Use of Toilets	1	All Members are using safe toilets	55		
	2	Toilet is regularly cleaned	55		
	3	Access and available of Soap and water for hand washing after using toilet	58	55	
2. Personal Cleanliness	1	Practice of hand washing with soap at critical times	81		
	2	Cleanliness during mensuration	96		
	3	Other hygienic activities (Bathing, Tooth brushing, Cutting nails etc.)	117	81	
3. Access and use of minimum required safe water	1	Water Storage and clean water vessel and covered	104		
	2	Use of water from covered well, handpump and protected source	109	104	
4. Use of Safe food	1	Use of Clean Cooking pot, Clean kitchen and Covered foods	114		
	2	Taking meal after well cooking	115		
	3	Safe storage of foods and not Using of Outdated foods	117		
	4	Using of safe nutritious foods for cooking and Cleaning the foods which can be eaten without cooking	114	114	
5. Clean and hygienic household and surroundings	1	Regularly cleaning inside and outside of household	78		
	2	Classified and management of waste from household	68		
	3	Safe management of waste water from household	71		
	4	Separate area for domestic animals and Proper animal waste management	104		
	5	Smokeless Kitchen (Improved Stove, Smokeless Stove, Bio-gas Stove, Gas Stove etc.)	65	65	

Chapter 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusions

In the VDC it was found that for declaring ODF each household at that time constructed the direct pit latrine (*Temporary* Toilet). The VDC was declared ODF before the SHMP 2011 came into action and is the first VDC to declare ODF in Kapilvastu District. The VDC was declared ODF with the support of RWSSP WN working in the district since 2008. The aim of the study was to examine the Post ODF situation of VDC in terms of five main indicators: i. Regular use of Toilet ii. Personal Cleanliness iii. Access and use of minimum required safe water iv. Use of safe food and v. Cleanliness of inside and outside households. The study also tried to assess the WASH service level the users receive in the VDC. Various participatory tools and methods were applied in carrying out the study.

After the 5 years ODF declaration of Gugauli VDC the study concludes "The more focus needs on behavior change during ODF movement and after ODF declaration**".** It was found that 68 % of total household in the VDC slip back or continue open defecation. On the other hand 32 % of Household constructed the permanent toilets upgrading their previously constructed temporary toilet after ODF declaration. The following conclusions are made based on the study findings:

- Water service level is good and people are found aware on use of safe water, temporary toilets were upgraded into permanent one, though still majority of the household doing open defecation (Slip back household) goes far from house, foot trail, roads and public places to defecate and hygiene level was found poor.
- Sanitation and hygiene service level were found very poor due to open defecation. Since those who have constructed the permanent toilets found improved and highly improved sanitation and hygiene service level respectively.
- ODF movement through VWASHCC was unable accelerate the post ODF movement immediate after the declaration of ODF and long gap seems people again enjoying in practicing open defecation and study found peoples' attitude likes no toilets in the home of elite people/natural leader, no money to construct toilet, waiting for government subsidy and rural (*Dehati*) people were the main barrier to promote sanitation and hygiene in the study area.
- Awareness among the people made their commitment in constructing toilets but are not sure when.
- The study concludes basically two types of problems one is related to technical and other is behavior change. Technological problem is construction of temporary toilets which were flooded/damaged immediately after ODF declaration (not more than 3 months) and behavior related problem is the use of toilet properly with its proper operation and maintenance.
- One toilet is for one household is also sometimes not sufficient for those having joint family, in such cases it is found that toilet is only for female **"*Beti bahan toilet mein Purus log bahar bagiya mein*"** so household size determine the toilet number even in single household. Permanent structure up to plinth level is seen but lacks superstructure to maintain privacy.

- For achieving total sanitized condition the VDC again start movement for ending open defecation. Without ending open defecation (first significant step towards total sanitation) it's not possible to climb the ladder of sanitation.

5.2 Recommendations

After the post open defecation free assessment of Gugauli VDC and the barriers identified from the study, the following are suggested for the both type of VDC i.e. ODF declared and on the process of declaration:

- Regular routine monitoring and support seems necessary from VWASHCC to prevent household slip back to open defecation and enhancing the WASH service levels towards total sanitation.
- VDC/ VWASHCC should focus its priority first for improving service level of WASH those who are receiving the benefit from poor WASH service.
- Immediate response from individual household towards construction of toilets in the study area should be initiated, for which projects working in the WASH sector like RWSSP-WN II can play an important role of facilitators and awareness creator to achieve total sanitation as the delay in this path leads people to defecate in open spaces.
- Not only permanent plinth structure, but privacy in using toilets should be maintained properly by superstructures from sustainability point of view.
- Indicators such as regular use of toilets, personnel cleanliness and cleanliness of households need to be more emphasized to march towards the Total Sanitation.

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Annex1:Questionnaire

Post Open Defecation Free Assessment of Gugauli VDC, Kapilvastu District towards achieving Total Sanitation

Disclaimers*: The information provided by you will be kept confidential and will be used only for the academic purposes.*

General Information:

Name of Respondent: Age: Sex: Male/Female

Total Member: Male: Female: Ward:

Section I: Water Service Level Indicators

1.1 How much time you spend to fetch water?

a) > 45 Min b)>30Min < 45Min c) >15Min <30Min d) <15 Min

1.2 How much water is available per day per person?

a) > 45 L b)>25L<45L c) >15L< 25L d) <15L

1.3 Is water available at all time?

a) Yes b) No

If no, how many hours is it available?

1.4 What about water availability at all the month of the year?

a) 12 month b) >11month <12 month c) >10month <11month d) <10 month

1.5 Where you want to put your water source?

a) Good, No possibility of contamination
b) Moderate likely to be contaminated
c) Poor, high chances of contamination
d) Very Poor, contaminated and intolerable

Section II: Sanitation Service Level Indicators

2.1 Are you aware that your VDC has been declared ODF Zone in 2067?

a) Yes b) No

If yes, what are the changes brought about by this declaration?

……

2.2 Do you own toilet facilities?

a) Yes b) No

If yes, which type?
If no, where do you normally go? :

Year of the toilet construction:

2.3 What do you do for the maintenance of toilets?

i)

ii)

iii)

iv)

2.4 What are your impressions about the toilet constructions and how did it improve your daily life?

Uses of Toilets:

2.4 Does everyone in the family use the toilets?

a. Yes b. Few family members use toilets c. No

If (b) and (c), What are the reasons?

2.6 Do you clean the toilet ? Yes No

If yes what is the frequency of cleaning?

a. Daily
b. Twice a week
c. Weekly
d. 15 days a month
e. Monthly

2.7 Do you have hand washing arrangements in the toilet? Yes No

2.8 Is your toilet (individual/ institutional) user friendly? Yes No

Section III: Personnel Hygiene

3.1 Do you wash your hands after toilet use?

a) Yes b) No

If yes, with or without soap?

3.2 When do you wash your hands?

i) immediately after the use of toilet
ii) Before cooking and eating
iii) After managing waste and handling of harmful substances
iv) before child care and taking care of sick people

3.3 Do you properly clean during menstruation to maintain proper personnal hygiene?

Yes No

3.4 How do you maintain other hygienic behaviors? (Bathing/Brushing teeth/ Cutting nails etc)

Section IV: Minimum requirement and safe water access and use

4.1 How do you store your water at the households?

4.2 How secured is the water sources for your consumption?

4.3 Do you have any provision of drinking water treatment at household level?

a) Yes b) No

If yes, what is the method of treatment?

Section V: Consumption of safe foods

5.1 Do you use clean cooking utensils and covered foods in your kitchen?

How do you keep your cooking utensils at the households?

Very Good Good Fair Poor Very Poor

5.2 Do you properly cook your food?

Yes Partially Cook No

5.3 Do you eat decayed foods and store the foods safely?

Yes Sometimes No

5.4 Use of safe nutritious foods for cooking and cleaning the foods which are edible without cooking?

Section VI: Households Sanitation

6.1 Do you regularly clean inside and surroundings of your households?

Daily Once a week Twice a week Once a month

No

6.2 Do you segregate the households waste and manage accordingly?

6.3 Do you manage the liquid waste coming from your households?

- How do you manage the liquid waste of your households

6.4 Have you constructed a separate shed for animals and birds and manage the waste accordingly?

6.5 Do you have smokeless kitchen?

Which stoves do you use in the kitchen? (Improved stoves/smokeless stoves/bio-gas stove//LPG stoves)

Annex 2: Overall Status of Total Sanitation at VDC Level in Sample HH

S.N.	Ward No	S.N	House Owner's Name	Regular Use of Toilet Yes (1)/No (0)	Personal Cleanliness Yes (1)/No (0)	Access and Use of Minimum Required Safe Water Yes (1)/No (0)	Use of Safe Food Yes (1)/No (0)	Cleanliness of Inside and Outside of Households Yes (1)/No (0)	Is Ready for Total Sanitation Declaration ? Yes (1)/No (0)
1	1	1	Kirpal Tharu	1	1	1	1	1	1
2		2	Ram Lakhan Tharu	1	1	1	1	1	1
3		3	Kangal Tharu	1	1	1	1	0	0
4		4	Peru Tharu	1	1	1	1	0	0
5		5	Krishna Bdr Tharu	1	1	1	1	0	0
6		6	Jhagaru Tharu	0	1	1	1	0	0
7		7	Ratnu Tharu	1	1	1	1	0	0
8		8	Tulsi Tharu	0	0	1	1	0	0
9		9	Bashu dev Tharu	0	0	1	1	1	0
10		10	Chautre Tharu	0	0	1	1	1	0
11		11	Ramdhani Tharu	1	0	1	1	0	0
12		12	Ram Mangal tharu	0	0	1	1	1	0
13		13	Pradarshani Tharu	1	0	1	1	1	0
14		14	Hariram Tharu	1	0	1	1	1	0
15		15	Ram Chhable Tharu	1	0	1	1	1	0
16		16	Salayani Tharu	1	0	1	1	1	0
17		17	Jaluram Tharu	0	0	1	1	1	0
18		18	Chairman Tharu	0	0	1	1	1	0

19		19	Janga Bdr Tharu	0	0	1	1	1	0
20		20	Laggan Tharu	0	0	1	1	1	0
21		21	Amrit Tharu	0	0	1	1	1	0
22		22	Jaypal tharu	0	0	1	1	1	0
23		23	Prabhu Nath tharu	0	0	1	1	1	0
24		24	Shambhu Tharu	0	0	1	1	1	0
25		25	Ram Shamaj tharu	0	0	1	1	1	0
26		26	Chandra Bdr Sunar	0	0	1	1	1	0
27		27	Dil Bdr Sunar	0	0	1	1	1	0
28		28	Parhari Tharu	0	0	1	1	1	0
29		29	Jumman Haluwai	1	1	0	1	1	0
30	2	1	Sarju Pd Jaiswal	0	1	1	1	1	0
31		2	Ram Surat Jaiswal	0	1	1	1	0	0
32		3	Rajendra Mauriya	0	0	1	1	0	0
33		4	Baburam Jaiswal	0	1	1	1	0	0
34		5	Kansiram Yadhav	0	1	1	1	0	0
35		6	PremChandra Jaiswal	1	1	1	1	0	0
36		7	Haridwar Pd Jaiswal	1	1	1	1	0	0
37		8	Kanikram Chai	1	1	1	1	0	0
38		9	Barsati Murau	0	1	1	1	0	0
39		10	Jiyaz Ahamad	1	1	1	1	1	1
40		11	Surendra Raj Mishra	1	1	1	1	1	1
41		12	Ram Pratap Jaiswal	0	1	1	1	0	0
42	3	1	Jaksan Tharu	0	0	0	0	0	0
43		2	Mahadev Tharu	1	1	1	1	1	1
44		3	Sukya Tharu	1	1	1	1	1	1
45		4	Baliram Tharu	0	0	1	1	1	0
46		5	Bhola Tharu	1	1	1	1	1	1

47		6	Jamuna Tharu	1	1	1	1	1	1
48		7	PremChandra Tharu	1	1	1	1	1	1
49		8	Narmati Somai	1	1	1	1	1	1
50		9	Tej Bdr Ale	1	1	1	1	1	1
51		10	Bhoj Bdr Saru	0	1	1	1	1	0
52		11	Sugam Rana	1	1	1	1	1	1
53		12	Nar Bdr Gharti	0	1	1	1	1	0
54		13	Manikala Khatri	1	1	1	1	1	1
55	4	1	Aanan Chaudhari	1	1	1	1	1	1
56		2	Banbari Chaudhari	1	1	1	1	1	1
57		3	Ramjiban Tharu	0	0	1	1	1	0
58		4	Dinesh Tharu	0	1	1	1	1	0
59		5	Uditnarayan Tharu	0	1	1	1	1	0
60		6	Harzu Tharu	1	1	1	1	1	1
61		7	Tulsi Ram Tharu	1	1	1	1	0	0
62		8	Kodai Tharu	0	1	1	1	1	0
63		9	Narmu Tharu	0	1	0	1	1	0
64		10	Biraju Tharu	1	1	1	1	1	1
65		11	Pahalman Tharu	1	1	1	1	1	1
66		12	Santosh Tharu	0	1	1	1	1	0
67		13	Kashiram Tharu	1	1	1	1	0	0
68		14	Hariram Tharu	1	1	1	1	0	0
69		15	Duti ram Tharu	1	1	1	1	0	0
70		16	Ramsamujha Tharu	0	1	1	1	0	0
71		17	Sriram Tharu	1	1	1	1	1	1
72	5	1	Dhode Teli	0	0	1	1	0	0
73		2	Kishan teli	0	0	0	1	0	0
74		3	Mithai teli	0	1	0	1	0	0

75		4	Akbal Husain	0	0	0	1	0	0
76		5	Gita Samrahi	0	0	0	0	0	0
77		6	Gheerau Bhar	0	1	0	1	0	0
78		7	Nirahu Pd teli	0	1	0	1	0	0
79		8	Mohamad Jama Bhat	0	0	1	1	0	0
80		9	Sakil Ahamad Khaa	1	1	1	1	0	0
81		10	Abdul Samaj Miya	0	1	1	1	0	0
82		11	Niteetal kahar	0	1	1	1	0	0
83		12	Mannan Bhat	0	1	1	1	0	0
84		13	Moharam dhuniya	0	1	0	1	1	0
85	6	1	Harilal Subedhi	1	1	0	1	1	0
86		2	Basant hari Sapkota	1	1	1	1	1	1
87		3	Hemlal Bhusal	0	0	0	1	0	0
88		4	Bishnuhari Sapkota	1	1	1	1	1	1
89		5	Yubaraj Sapkota	1	1	1	1	1	1
90		6	Gangadhar Bashyal	1	1	1	0	1	0
91		7	Sita Baral	1	1	1	1	1	1
92		8	Tanka Pd Poudel	1	1	1	1	1	1
93		9	Jiblal Bhusal	1	1	1	1	1	1
94		10	Sribalav Bhattari	1	1	1	1	1	1
95		11	Tuika devi kaphle	1	1	1	1	1	1
96		12	Chovakanta Chapagain	1	1	1	1	1	1
97	7	1	Jiblal Gurung	1	1	1	1	1	1
98		2	khagendra Bdr Tapa	1	1	1	1	0	0
99		3	Shiv Kumar pandey	0	1	1	1	1	0
100		4	Jamunadevi Pandey	1	1	1	1	1	1
101		5	Deepak Pandey	0	1	1	1	1	0

102		6	Narayan Shris	1	1	1	1	0	0
103	8	1	Bhagauti Mourya	0	1	1	1	0	0
104		2	Chhikan Koti	0	0	1	1	0	0
105		3	Rampratap Chai	0	0	1	1	0	0
106		4	Sumrin Mourya	1	1	1	1	0	0
107		5	Pradip Kumar Chai	0	1	1	1	0	0
108		6	Bijaya Kumar Chai	0	1	1	1	0	0
109	9	1	Habibulla	0	1	1	1	0	0
110		2	Abdul Rahaman	1	1	1	1	0	0
111		3	Magare Miya	0	1	1	1	0	0
112		4	Mollahu Bhar	0	1	1	1	0	0
113		5	Baridi Ahamad Miya	0	0	1	1	0	0
114		6	Jokhu Kewat	0	1	0	1	0	0
115		7	Balgovinda Kewat	0	0	1	1	0	0
116		8	Ramjiban Miya	0	0	1	1	0	0
117		9	NurMohamad Miya	1	1	1	1	0	0
			Total (Yes)	**55**	**81**	**104**	**114**	**65**	**30**

Annex 3: Observation Checklists

1) Do community people wash hands with soap and water properly in three critical times? (Observation)
2) Is there availability of soap, towel, washing platform in the HHs? (Observation)
3) Have people maintained personal hygiene? (Observation)
4) Are the foot trails, road, public places, court yard, etc. clean in the community? (Observation)
5) Cleanliness inside and outside of households.
6) Is solid waste/waste water managed properly? (Observation)
7) Do people practice safe food cooking? (Observation)
8) Water storage and management practices.

Annex:4 Focus Group Discussion

Topics:

- Conditions before the ODF
- Declaration Process for ODF,
- Changes brought by ODF
- Sustainability of ODF,
- Towards Total sanitation (Any Barrier),

Recommendation for ODF sustain and promotion of total sanitation.

Annex 5: Participants of Focus Group Discussion

S.N	Name of person In FGD	Gender		Place	Ward Number	Remarks
		Male	Female			
1	Rum Bdr Sunar	M		Emilikharka	7	FGD 1
2	Dhanbir Sunar	M		Emilikharka	7	
3	Urji Singh Thapamagar	M		Emilikharka	7	
4	Gaietri Roka		F	Emilikharka	7	
5	Min Maya Gurung		F	Emilikharka	7	
6	Yasoda Pandey		F	Emilikharka	7	
7	Khima Pun		F	Emilikharka	7	
8	Sunita Roka		F	Emilikharka	7	
9	Narmaya Thapa		F	Emilikharka	7	
10	Mitra Bdr Gurung	M		Emilikharka	7	
11	Shiv kumar Pandey	M		Emilikharka	7	
12	Balika Rana		F	Emilikharka	7	
13	Phanima Mo.	M		Padariya	7	FGD2
14	Sushila Yadav		F	Padariya	7	
15	Pravawati Yadav		F	Padariya	7	
16	Ramautar Yadav	M		Padariya	7	
17	Krishna Pd Teli	M		Padariya	7	
18	Paras Kewat	M		Padariya	7	
19	Buddha Ahir	M		Padariya	7	
20	Rasaran Teli	M		Padariya	7	
21	Murali Yadav	M		Padariya	7	
22	Munni Dhobi		F	Padariya	7	
23	Barsati Yadav		F	Padariya	7	
24	Khadak Bdr Thapa	M		Madhawanagar	8	FGD3
25	Bal Bdr Mahatra	M		Madhawanagar	8	
26	Narayan Bdr Thapa	M		Madhawanagar	8	
27	Man Bdr KC	M		Madhawanagar	8	
28	Gir Bdr Thapa	M		Madhawanagar	8	
29	Rekam Bdr Thapa	M		Madhawanagar	8	
30	Ujirsingh Mahatra	M		Madhawanagar	8	
31	Yamkala Pokheral		F	Madhawanagar	8	
32	Raj Kumari Thapa		F	Madhawanagar	8	
33	Khadak Bdr KC	M		Madhawanagar	8	
34	Bijaya Bohara	M		Madhawanagar	8	
35	Prakash Babu Thapa	M		Madhawanagar	8	
36	Sushila Thapa		F	Madhawanagar	8	
37	Rina Thapa		F	Madhawanagar	8	
38	Mina Thapa		F	Madhawanagar	8	
39	Sita Thapa		F	Madhawanagar	8	
40	Shiv kumar Chai	M		Padrauna	8	FGD4
41	Santosh Kumar Gupta	M		Padrauna	8	

42	Rabindra Prasad Tiwari	M		Padrauna	8	
43	Ramesh Gupta	M		Padrauna	8	
44	Lalman Mourya	M		Padrauna	8	
45	Bishnu Kori	M		Padrauna	8	
46	Ram Sumrin Teli	M		Padrauna	8	
47	Sumrin Pd Mourya	M		Padrauna	8	
48	Radheshyam Mourya	M		Padrauna	8	
49	Suresh Kumar Gupta	M		Padrauna	8	
50	Akbal Husein Miya	M		Mauwadhudhar	9	FGD5
51	Gaihada Kori		F	Mauwadhudhar	9	
52	Sayara Begam mo		F	Mauwadhudhar	9	
53	Pramila Jaiswal		F	Mauwadhudhar	9	
54	Srikanti Tiwari		F	Mauwadhudhar	9	
55	Budhai Dhaniya		F	Mauwadhudhar	9	
56	Mannan Miya	M		Mauwadhudhar	9	
57	Gaya Pd Tiwari	M		Mauwadhudhar	9	
58	Mo. Muslim	M		Mauwadhudhar	9	
59	Banwari Tharu	M		Loharaula	4	FGD6
60	Likharam Chaudhari	M		Loharaula	4	
61	Dil Bdr Tharu	M		Loharaula	4	
62	Rahila Tharu		F	Loharaula	4	
63	Keshav Tharu	M		Loharaula	4	
64	Raju Kumar Tharu	M		Loharaula	4	
65	Taklu Tharu	M		Loharaula	4	
66	BuddhaRam Tharu	M		Loharaula	4	
67	Shuka Dev Tahru	M		Loharaula	4	
68	Ram Swarup Tharu	M		Loharaula	4	
69	Bhagirath Tharu	M		Loharaula	4	
70	Raju Chaudhari	M		Loharaula	4	
71	Sunita Tharu		F	Loharaula	4	
72	Gulabrani Tharu		F	Loharaula	4	
73	Suganti Tharu		F	Loharaula	4	
74	Vagamhali Tharu		F	Loharaula	4	
75	Krishna Bdr Chaudhari	M		Loharaula	4	
76	Ram Lakhan Yadav	M		Jarlaiya	5	FGD7
77	Yusuf Mohamad	M		Jarlaiya	5	
78	Gajai Bhar	M		Jarlaiya	5	
79	Dinesh Yadav	M		Jarlaiya	5	
80	Rambilash Yadav	M		Jarlaiya	5	
81	Ram Newas Kori	M		Jarlaiya	5	
82	Gangaram Yadav	M		Jarlaiya	5	
83	Chaitu Bhar	M		Jarlaiya	5	
84	Radheshyam Yadav	M		Jarlaiya	5	
85	Bam Bdr Bhar	M		Jarlaiya	5	

86	Bijaya Bhar	M		Jarlaiya	5	
87	Jhagaru Kori	M		Jarlaiya	5	
88	Bikram KC	M		Newalagunj	1	
89	Kamal Bista	M		Newalagunj	1	
90	Tek Bdr Budhathoki	M		Newalagunj	1	
91	Khemraj Budhathoki	M		Newalagunj	1	
92	Jagram Chaudhari	M		Newalagunj	1	
93	Janak Bdr Mahatra	M		Newalagunj	1	
94	Ghanshyam Nepali	M		Newalagunj	1	
95	Kallu Tharu	M		Newalagunj	1	
96	Krishna Bdr Kumal	M		Newalagunj	1	
97	Shyam Bista	M		Newalagunj	1	
98	Deviram Chaudhari	M		Newalagunj	1	
99	Ishwor Bdr Panthi	M		Newalagunj	1	
100	Madan Panthi	M		Newalagunj	1	
101	Pancha Bdr Kumal	M		Newalagunj	1	
102	Kashi Ram Chaudhari	M		Newalagunj	1	FGD8
103	Dayaram Chaudhari	M		Newalagunj	1	
104	Manilal Sunar	M		Newalagunj	1	
105	Hari Devi Chaudhari		F	Newalagunj	1	
106	Jugmati Chaudhari		F	Newalagunj	1	
107	Bimala Mahar		F	Newalagunj	1	
108	Vola Chaudhari		F	Newalagunj	1	
109	Nawaraj Hamal	M		Newalagunj	1	
110	Krishna Bdr Chaudhari	M		Newalagunj	1	
111	Kamala Panthi		F	Newalagunj	1	
112	Topali Pun		F	Newalagunj	1	
113	Chandrakali Chaudhari		F	Newalagunj	1	
114	Pali Bista		F	Newalagunj	1	
115	Subash Chaudhari	M		Newalagunj	1	
116	Dan Bdr KC	M		Newalagunj	1	
117	Thark Gaha	M		Hanumannagar	3	
118	Trilok Chaudhari	M		Hanumannagar	3	
119	Thanedar Chaudhari	M		Hanumannagar	3	
120	Bhim Bdr Chaudhari	M		Hanumannagar	3	
121	Jamuna Pd Chaudhari		F	Hanumannagar	3	
122	Ram Lalit Chaudhari	M		Hanumannagar	3	FGD9
123	Lilawati Chaudhari		F	Hanumannagar	3	
124	Sukhani Chaudhari		F	Hanumannagar	3	
125	Laxmi Chaudhari		F	Hanumannagar	3	
126	Rama Chaudhari		F	Hanumannagar	3	
127	Baleshwor Chaudhari	M		Hanumannagar	3	
128	Niyaz Ahamad	M		Gugauli	2	FGD10
129	Govinda Lal Nau	M		Gugauli	2	

130	Nanda Lal Kalwar	M		Gugauli	2	
131	Nitesh Kumar Yadav	M		Gugauli	2	
132	Barsati Mahato		F	Gugauli	2	
133	Kanikram Chahi	M		Gugauli	2	
134	Ramdas Nau	M		Gugauli	2	
135	Pintu Nau	M		Gugauli	2	
136	Kallu Bhar	M		Gugauli	2	
137	Pradip Mouriya	M		Gugauli	2	
138	Abdullaha Miya	M		Gugauli	2	
139	Shyam Lal kori	M		Gugauli	2	
140	Gita Mishra		F	Gugauli	2	
141	Tara Mati Jaiswal		F	Gugauli	2	
142	Radha Mishra		F	Gugauli	2	
143	Aajijun Nisha		F	Gugauli	2	
144	Chinka Dhobi	M		Gugauli	2	
145	Rajmati Yadav		F	Gugauli	2	
146	Krishnamati Jaiswal		F	Gugauli	2	
147	Basmati Dhobi		F	Gugauli	2	
148	Haridhwar Jaiswal	M		Gugauli	2	
149	Rudra Baral	M		Magarghatta	6	
150	Durga Prasad Mishra	M		Magarghatta	6	
151	Bishnuhari Sapkota	M		Magarghatta	6	
152	Agyaram Bhar	M		Magarghatta	6	
153	Mahabir Parasad Mishra	M		Magarghatta	6	
154	Maniram Bishwakarma	M		Magarghatta	6	
155	Prabhu Dayal Chai	M		Magarghatta	6	
156	Ram Parasad Kewat	M		Magarghatta	6	
157	Ram Kishor Chahi	M		Magarghatta	6	
158	Raghubir Yadav	M		Magarghatta	6	
159	Raghunath Chai	M		Magarghatta	6	
160	Sandip Kumar Chauhan	M		Magarghatta	6	
161	Pashupati Yadav	M		Magarghatta	6	FGD 11
162	Bishwa Nath BK	M		Magarghatta	6	
163	Urmila Chai		F	Magarghatta	6	
164	Innermati Chai		F	Magarghatta	6	
165	Raghunath Yadav	M		Magarghatta	6	
166	Lilaballav Chapagain	M		Magarghatta	6	
167	Janga Bdr Gupta	M		Magarghatta	6	
168	Ganagadhar Bashyal	M		Magarghatta	6	
169	Sabitra Chapagain		F	Magarghatta	6	
170	Sarita Aryal		F	Magarghatta	6	
171	Ramdas kalwar	M		Magarghatta	6	
172	Remkant Aryal	M		Magarghatta	6	
173	Chandrawati Sapkota		F	Magarghatta	6	

Annex 6: Photographs

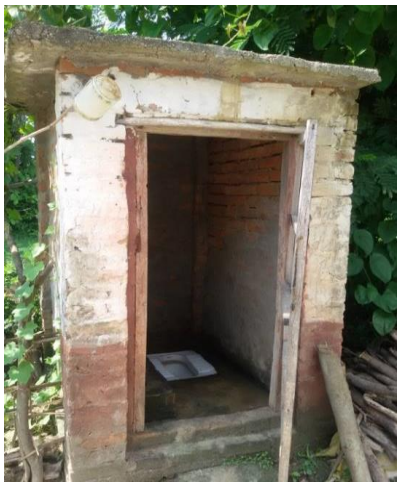

Plate 1: Household Permanent Toilet **Temporary Toilet**

Plate 2: Water Supply Service in the VDC

Plate 3: Waste Pit & Utensil drying Rack in VDC

Plate 4: Focus Group Discussion during Study