

**POST OPEN DEFECATION FREE ZONE ASSESSMENT
OF
CHILKHAYA VILLAGE DEVELOPMENT COMMITTEE:
A STUDY OF CHILKHAYA VDC, KALIKOT DISTRICT, NEPAL**

**A Thesis Submitted To
The Central Department of Rural Development,
Tribhuvan University
In partial fulfillment of the requirement for the Degree of
Master of Arts in Rural Development**

**Submitted By
CHATURBHUJ SHAHI
Central Department of Rural Development
Tribhuvan University, Kathmandu
T.U. Registration No. 9-1-57-13-2003
Exam Roll No. 281388**

January, 2018

DECLARATION

I hereby declare that this study entitled **Post Open Defecation Free Zone Assessment of Chilkhaya Village Development Committee**, A study of Chilkhaya VDC, Kalikot Distirct Nepal. 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.

.....

Chaturbhuj Shahi

Date:-2047-9-21

(5 January, 2018)

LETTER OF RECOMMENDATION

This is to certify that this thesis entitled **Post Open Defecation Free Zone Assessment of Chilkhaya Village Development Committee**, A study of Chilkhaya VDC, Kalikot Distirct Nepal. prepared and submitted by Chaturbhuj Shahi, under my supervision and guidance. I hereby recommend it for the examination by thesis committee as partial fulfilment of the requirement for the Degree of Master of Art in Rural Development.

.....

Prajwal Man Pradhan

Lecturer

Date: 2074-9-21

(5 January, 2018)

APPROVAL LETTER

This is certify that the thesis entitled **Post Open Defecation Free Zone Assessment of Chilkhaya Village Development Committee**, A study of Chilkhaya VDC, Kalikot Distirct Nepal. Submitted by **Mr. Chaturbhuj Shahi**, in the prescribed format of the Faculty of Humanities and Social Science, has been examined and accepted as partial fulfillment of the requirement for the Degree of Master of Arts in Rural Development.

Evaluation Committee

.....
Prof. Dr. Pushpa Kamal Subedi
(Head of Department)

.....
Ratna Mani Nepal
(External Examiner)

.....
Prajwal Man Pradhan
(Thesis Supervisor)

Date:-2047-9-28
(12 January, 2018)

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ABSTRACT

Chilkhaya Village Development Committee (VDC) is one of the 18th Open Defecation Free Zone Declared VDC (2014) in the Kalikot District with the Support of District Water Supply Sanitation, and Hygiene Coordination Committee, Kalikot. At the Time of ODF declaration, 817 and 269 household 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 Chilkhaya VDC based on the individual Water Sanitation and Hygiene service level to achieve total sanitation.

The research undertake in a descriptive and qualitative framework. The research used data triangulation a process of collecting data by using more than two methods. Relevant secondary data was obtained from documents, information on the internet, project record, and other published source of major stakeholders in WASH sector. For Primary data collection semi structured interviews, field visit and observation of the target communities and focus group discussion were undertaken in the study area.

Out of 817 household in the VDC only 269 (32 %) household upgraded their toilets to permanent one, 208 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 "*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 Chilkhaya 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 simple statistical tools are used of analysis between major indicators in achieving total sanitation in Chilkhaya 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.

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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
GESI	Gender Equality and Social Inclusion
Lpcd	Liter 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	Nepal Management Information Project
NSHCC	National Sanitation and Hygiene Coordination Committee
NSHSE	National Sanitation and Hygiene Steering Committee
OD	Open Defecation
ODF	Open Defecation Free
QARQ	Quantity Accessibility Reliability and Quality
R-WASH-CC	Regional Water Supply, Sanitation and Hygiene Coordination Committee
RWSSP-WN	Rural Water Supply and Sanitation Project in Western Nepal
SACOSAN	South Asian Conference on Sanitation
SHMP	Sanitation & Hygiene Master Plan
UN	United Nation
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 User Master Plan
WUSE	Water User and Sanitation Committee
W-WASH-CC	Ward Level Water Supply, Sanitation and Hygiene Coordination Committee
CBS	Central Beuro of Static
JSR	Joint Service Report
MDG	Millennium Development Goal
SDG	Sustainable Development Goal
SDP	Sector Development Plan
NPC	National Planning Commission
IFRC	International Federation of Red Cross

CHAPTER – I

INTRODUCTION

1.1 Background

Sanitation is basis of human 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 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 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 community 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.

Chilkhaya VDC, in Kalikot District, was declared Open Defecation Free (ODF) Zone in 2068. The VDC has converted into partial open defecation zone i.e during preliminary filed visit in the District, it was found in three VDCs namely Odanaku, Chilkhaya and Jubitha less than 50% of the household use toilets. This situation as of June 2017 has motivated to carry out this research in the WASH sector in Chilkhaya 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 change 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 Chilkhaya VDC based on 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.

1.5 Significance of the Study

This study was particularly focused on the post ODF scenario of Chilkhaya VDC, Kalikot and study is significant for addressing rural 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.
- Factor identified for ineffectiveness in ODF zones can be used to address the issues of ODF.

1.6 Scope and Limitation of the 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 purpose of the study.

The study assessed water quality issues: however, the water quality analysis was not done. The study in on WASH but more focused on Post ODF status assessment of the VDC.

1.7 Organization of the Study

This study has been divided into five chapters these are as follows.

Introduction : The first chapter deals with background, information of water supply, sanitation and hygiene status, statement of the problem, research questions, research objectives, significance of the study and scope and limitation of the study.

Literature Review: The second chapter deals with the review of the relevant literature. It contains brief discussion water supply, sanitation and hygiene (WAHS) status of after post ODF, the theoretical perspectives, and empirical study of post ODF zone assessment.

Research Methodology: The third chapter contains research methodology adopted for the study. In this chapter research design, rationale of the study area, source of data collection, population sampling size and sampling procedure, household survey, field visit and observation, key informant interview, secondary data collection and data analysis.

Presentation and analysis of data: The fourth chapter contains setting of the study area, presentation of data, post ODF declaration process and status of the VDC, present (WASH) service level, change and achievement made after ODF declaration in VDC, drivers and barriers towards total sanitation and finding of the study.

Summary, conclusion and recommendation: The fifth chapter contains summary conclusion and recommendation of the study.

In last part of the study, photographs of the study area and biography have been included. Necessary annex are also included after bibliography.

CHAPTER-II

LITERATURE REVIEW

This chapter deals with available history, impact, management and development of post open defecation free etc., which were reviewed to generate adequate relationship between the variable and to share the others opinion on the issued statements .

2.1 Nepal Sanitation and Hygiene Master Plan

The Sanitation and Hygiene Master plan focuses on mainly three key points. First, is the focus on the achievement of Open Defecation Free (ODF) zones and universal access to toilets, this should happen through a total sanitation approach. Next to the increase of toilet coverage, the programs should encourage hygiene behaviors, with total behavioral change seen as the end product. The second key point implies that toilet coverage and waste management are the key components for hygiene and sanitation in urban and semi-urban settings. Finally and most important is the third key point of the master plan. The master plan recognizes the leadership of local governments in sanitation programmes and helps formulating strategies for programming in central government, donor, NGOs and local governments. (GoN, 2010: 11) Most important of the master plan are the guiding principles, these principles have to be followed while planning and implementing hygiene and sanitation programmes. The nine guiding principles of the master plan are (GoN, 2010: 13-15):

Reaching ODF is the first criteria of hygiene and sanitation programmes and post ODF activities are required to achieve sustainable environment.

Within rehabilitation or reconstruction water supply and sanitation programmes at least 20 percent of the budget should go to promotion of hygiene and sanitation to ensure universal access to sanitation.

Different choices in sanitation facilities have to be offered, to ensure people the choice of a low cost, hygienic, user's friendly or sustainable facility.

The leadership of the hygiene and sanitation programmes should be with the local bodies.

The smallest implementation area of a hygiene and sanitation programme shall be a VDC or municipality.

To ensure the access of poor and disadvantaged groups to sanitation facilities financial support mechanism will be managed on the local level.

Within the programme area all public institutions should have a hygienic toilet and the public schools should have Child-, Gender-, and Differently abled (CGD) sanitation facilities.

In urban, semi-urban and district headquarters all new build commercial buildings and public places should have toilets and septic tanks.

Within the programmes on hygiene and sanitation, hand washing with soap should be promoted to stimulate hand washing and other hygienic behaviors.

New sanitation and hygiene programmes should follow these guidelines. It is not obliged to follow a specific approach. All (software) approaches are allowed when the use of the guiding principles is insured.

2.2 Nepal Water Supply, Sanitation and Hygiene Sector Development Plan

2.2.1 Water Supply

Considerable progress has been made over the past decade to realize national target of basic water and sanitation services for all by 2017. Census reports show that 85% of Nepalese in 2011 have access to improved water sources, up from 72% in 2001 (CBS, 2001, 2011). Table 1 provides rural and urban breakdown in terms of access and non-access to water services. According to the Joint Monitoring Programme (JMP, 2013), Nepal has already achieved the Millennium Development Goal (MDG) target for access to improved water supply (Actual = 85%, Target 2015 = 73%)

Table 2.2.1: Access to Water Supply- Urban Rural Scenario

Region	Population	% Population with access to water	Gap in access (No of People without access to water)
Urban	4523820	87	585382
Rural	21970684	85	3295603
Total	26494504	85	3880985

Source: CBS, census 2011

Table: 2.2.1 Access to Water Supply across Ecological Regions

Population Category	Project Population (2014)	% Population with access to water	Gape in access (No of People without access to water)
Mountain	1549734	80.19	306692
Hill	21970684	84.89	1846474
Terai	14065936	84.79	2139429
Total	27835882	83.59	4292595

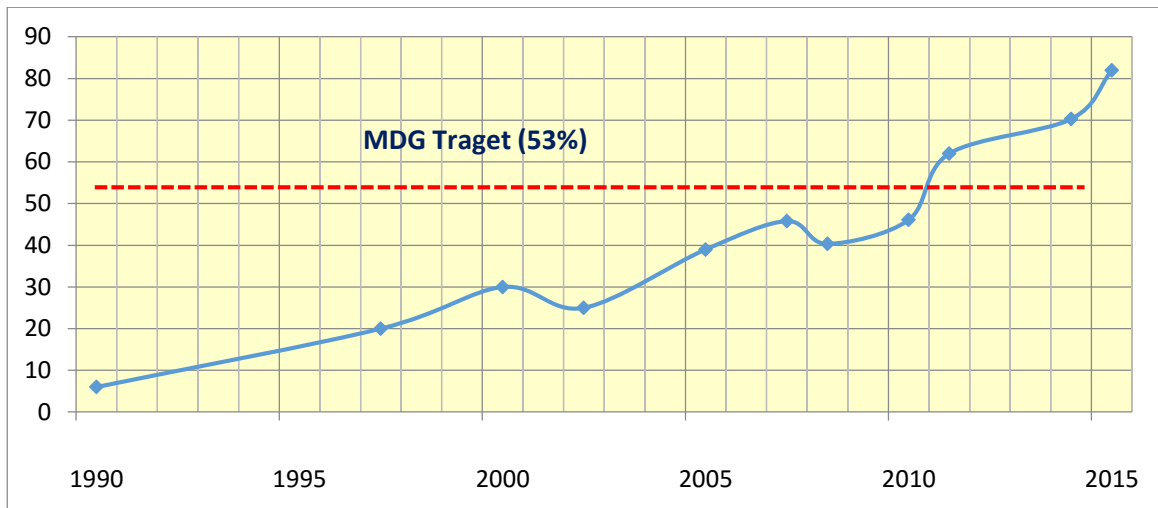
Source: NMIP, 2014

2.2.2 Sanitation

Nepal has come a long way in improving basic sanitation services, with coverage doubling to 62% in 2011 (Census 2011, CBS) compared to 30% in 2001. It has already surpassed MDG target of 53%. Following the internalization of a National Sanitation and Hygiene Master Plan, 2011, Nepal has witnessed social momentum and transformation in the improvement of sanitation with several villages, municipalities and districts being declared open-defecation free Nepal has witnessed social momentum and transformation in the improvement of sanitation with several villages, municipalities and districts being declared ODF. Coverage to basic sanitation facility has now reached 81% of the population (DWSS annual progress review, 2015).

Table: 2.2.2 Sanitation progress over the years.

Year	1990	1997	2000	2002	2005	2007	2008	2010	2011	2014	2015
Cover%	6	20	30	25	39	45.8	40.35	46.1	62	70.3	81.95
Source	8 th Plan	9 th Plan	NPC 2005	10 th Plan	NPC 2013	SSR 2011	NMIP 2008	NMIP 2014	13 th Plan	NMPI 2014	DWSS 2015



Source: CBS 2011; NMIP 2014

Figure: 2.2.2 Show the trend of sanitation progress over the years.

2.3 Linkage to International Commitments on Water supply and Sanitation

2.3.1 Sanitation and Water for All

Sanitation and Water for All (SWA) is a global partnership of over 90 developing country governments, donors, civil society organizations and other DPs working together to catalyze political leadership and action, improve accountability and use resources more effectively. Partners work towards a common vision of universal access to safe water and adequate sanitation. SWA is not an implementing organization, nor a funding channel. Recognizing that countries and organizations achieve more by working together, SWA provides a transparent, accountable and results-oriented framework for action based on common values and principles. The external support agencies have made their commitments to increase sanitation financing and called upon finance ministers also to increase domestic resource mobilization (SWA High Level Meeting, SWA HLM 2014).

2.3.2 South Asian Conference on Sanitation

South Asian Conference on Sanitation (SACoSan), a government led biennial convention held on a rotational basis in each South Asian country provides a platform for interaction on sanitation. SACoSan is intended to develop a regional agenda on sanitation, enabling learning from the past experiences and setting actions for the future. The objectives of such conferences are to accelerate the progress in sanitation and hygiene promotion in South Asia and to enhance quality of peoples' life. The SACoSan

process is instrumental to generate political will towards better sanitation in the region. The fifth SACoSan held in 2013 in Kathmandu resulted in a signed "Kathmandu Declaration" including an end to Open Defecation Free (ODF) South Asia by 2023 and to progressively move towards sustainable environmental sanitation. The 6thSACoSan held in January 2016 in Dhaka reiterated on the resolutions of earlier conferences. Finance ministers from the region have committed to increase sanitation financing. All SACoSans till now have committed to increase transparency of funding on sanitation.

2.3.3 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.

2.3.4 Sustainable Development Goals

The UN has formulated Sustainable Development Goals (SDGs), as a follow up to MDGs, with a proposed set of 17 goals and 169 targets relating to future development, which demonstrates the scale and ambition of new international development agenda. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.

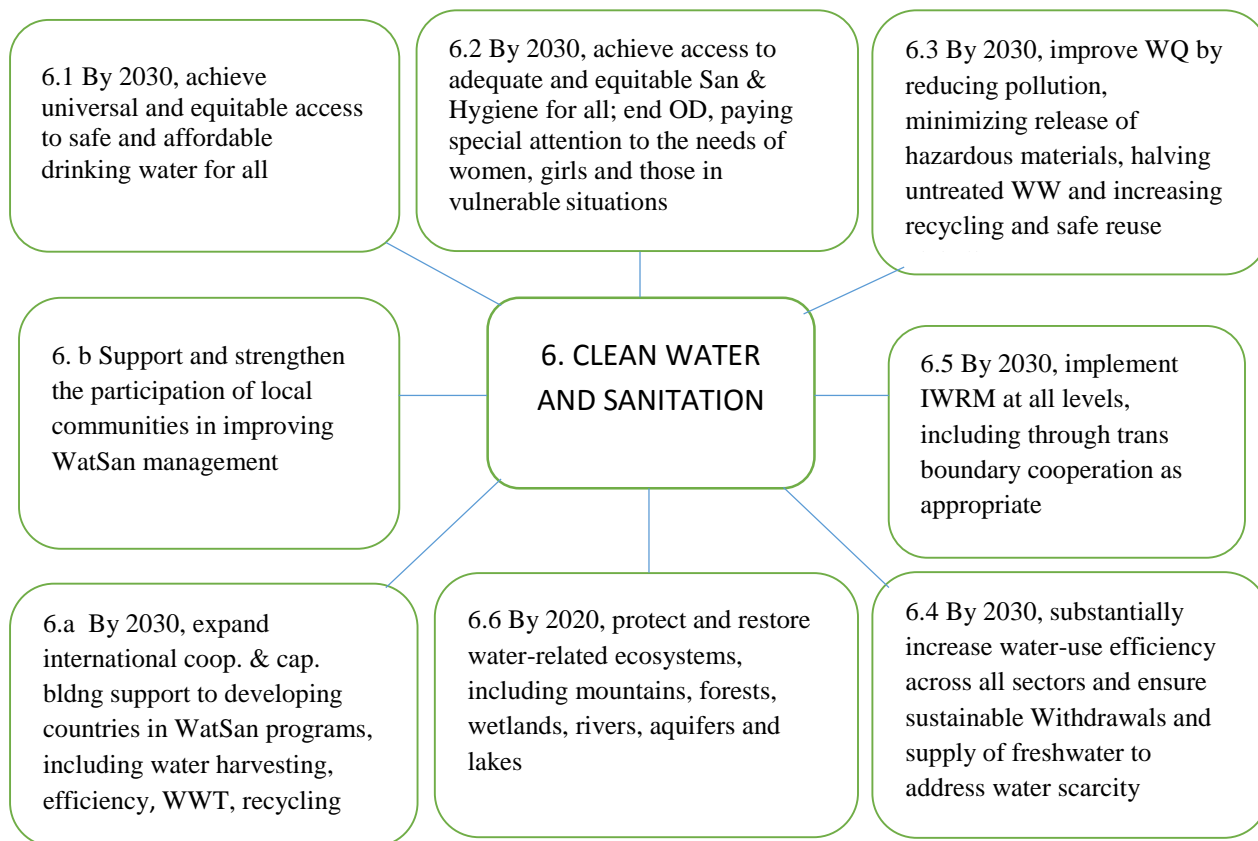


Figure: 2.3.4 Sustainable development goal -6

Sustainable Development Goal 6 - Ensure availability and sustainable management of water and sanitation for all The SDG 6 targets for 2030 include the following:

- (i) Achieve universal and equitable access to safe and affordable drinking water for all.
- (ii) Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation.
- (iii) Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials.
- (iv) Substantially increase water-use efficiency across all sectors.
- (v) Implement integrated water resources management at all levels.
- (vi) Protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and glacial lakes.

Basic water supply coverage in Nepal was 83.6 percent in 2014 while sanitation had reached 70.3 percent of the population. However, less than half (49.5 percent) of all households had access to piped water supplies. Access to such supplies varies across social groups and by place of residence. Access to piped water is positively associated

with household wealth, as almost all (99 percent) households in the highest wealth quintile are located within 30 minutes of a water source and access is uniform during both the rainy and dry seasons. Providing piped safe water is challenging as a recent survey indicated that 82.2 percent of households use water contaminated with E. coli (CBS, 2014). Although two-thirds (67.6 percent) of Nepal's population use latrines, only 30 percent of urban households are connected to a sewerage systems. Two-fifths (41 percent) of local authorities (VDCs and municipalities) were declared open defecation free in 2014. However, there is still a challenge to close the sanitation gap in the Tarai (southern flatlands) to achieve universal access to basic sanitation.

The proposed SDG 6 targets for Nepal 2030 include the following:

- (i) 99 percent household access to basic water supplies.
- (ii) 95 percent of households have access to a piped water supply and improved sanitation.
- (iii) All communities are open defecation free.
- (iv) All urban households are connected to a sewerage system.

In these Goals and targets, SDGs envision the world where commitments on the human right to safe drinking water and sanitation and where there is improved hygiene is affirmed; and where food is sufficient, safe, affordable and nutritious. Out of 17 Goals, WASH is included as Goal 6, which includes 8 targets. The SDGs are integrated and indivisible, global in nature and universally applicable, taking into account country specific realities, capacities and levels of development and respecting national policies and priorities. Targets are defined as aspirational and global, with each Government setting its own national targets guided by the global level of ambition but taking into account national circumstances. Also, each Government will decide how these aspirational and global targets should be incorporated into national planning processes, policies and strategies. (NWSHSDP, 2016-2030)

2.4 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 2.4. 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 2.4 Water and Sanitation Coverage in Nepal

S.N.	Development Regions	Water Supply	Sanitation Coverage (%)	Remarks
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	

Source: NMIP/DWSS, 2014

2.5 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 2.5.

Table 2.5 Assessment of Water Service Level Indicators

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

Source: Potter et al., 2011 as cited by IRC, 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 2.6 and 2.7.

Table 2.6 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 2.7 Hygiene Service Level Indicator Assessment

Effectiveness levels	Faecal containment and latrine use	Hand washing with soap/ substitute	Drinking water source and management
Highly Improved	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	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 fecal waste	Improved - 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

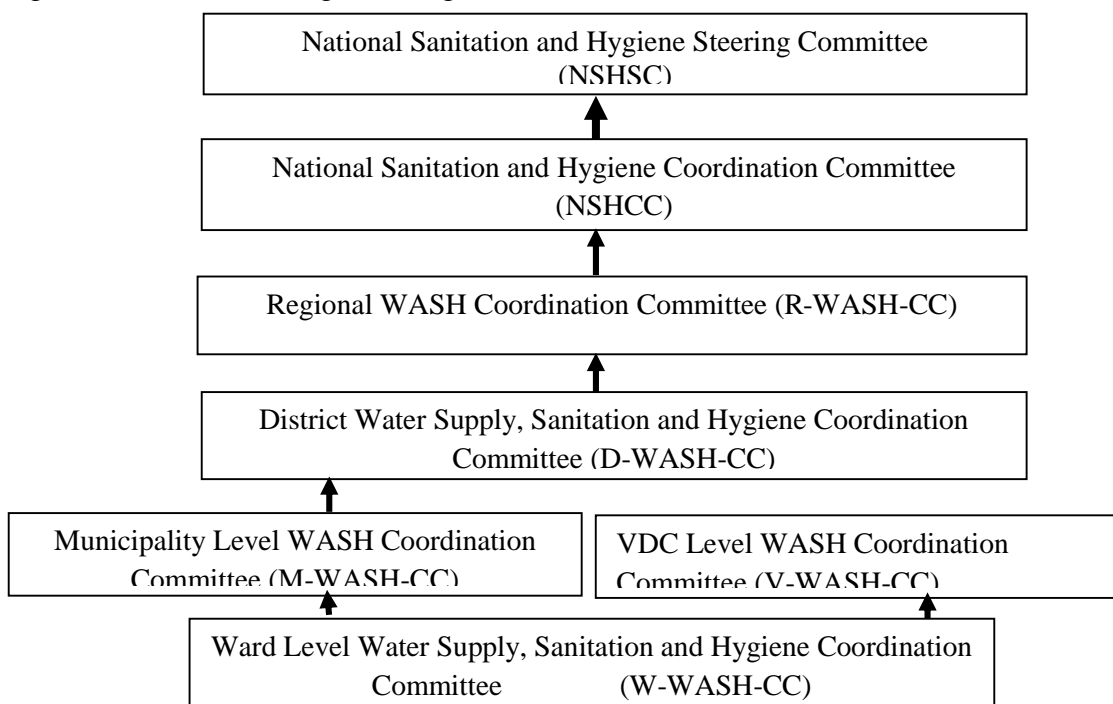
Source: Potter et al., 2011 as cited by IRC, 2011

2.6 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 2.6) 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 2.6 Vertical Linkages among Different Level WASH Coordination Committees



2.7 Indicators for Sustainable ODF

Open Defecation (OD) means defecating 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:-

- i. There should not be Open Defecation in the designated area at any given time;
- ii. All households have access to improved sanitation facilities (toilets) with full use, operation and maintenance; and
- iii. 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:

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

2.8 Total Sanitation and its indicator

True ODF is the foundation of Post ODF phase and basis for Total Sanitation 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 household 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 2.8 Process towards achieving Total Sanitation

The Global Scaling Up Rural Sanitation Project considers a community to have achieved Total Sanitation (with underlying assumption 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 :

All household have stopped Open Defection.

All household own and use improved (safe/hygienic) latrines for all excreta Disposal, and maintain their facilities hygienically.

All household regularly wash their hands with soap after defecation and cleaning up infant feces, and before eating, feeding and handling food.

All household handle and store food and drinking water safely.

All household use practices for managing domestic solid and liquid waste.

(Mukherjee, 2012)

2.9. 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;

i) Hardware related to Technological problems and ii) 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).

2.10. Empirical Review

Devkota (2011) conducted a study on “Open Defecation Free Situation” in Nepal. He found that only 92% households used toilets. Out of 92%, 14% households had partially functional toilets and 3 % had non-functional toilets. The study showed that only three quarters of the households had fully functional toilets (Devkota, 2011; Sah, 2013). Thus, there is a big question of sustainability of ODF in the context of Nepal. There are some stories of failure of ODF in Nepal. Toli and Pandusen VDCs of Bajura district were declared ODF but could not maintain minimum requirement of post ODF situation. Then, ultimately the District Water Supply, Sanitation and Hygiene Co-ordination Committee (D-WASH-CC) reverted the decision (DWSS/ESDMS, 2013).

Poor sanitation causes poor health. Especially, women, adolescent girls and infants suffer from the poor sanitation. As a result of poor sanitation, acute respiratory infections (ARI) spread among children of age under five (MoHP, 2006). Generally human faeces are the main sources of ARI. “*One gram of human feces can contain 10 million viruses and 1 million of bacteria*” (GoN, 2000; cited in Sah 2013). Thus, there is a need of movement for toilet construction in Nepal. Government of Nepal realized this fact and started a movement of ODF throughout the country. The programme has become popular; schools, households, local administrative bodies (i.e. VDC, Municipalities, and DDCs) have accepted the concept of ODF. And, the rate of ODF declaration is increasing day to day. According to the Sanitation and Hygiene Master Plan (SHMP, 2011), open defecation free zone can be declared if following conditions are fulfilled:

- Every household of a village development committee (VDC), Municipality or a whole district should have an access to improved toilet,
- There should not be seen any sign of human excreta openly in the declared zone, and
- Public and private institutions such as schools, hospitals, government and private offices must have toilet facilities.

GoN, 2011, Declaration of ODF is followed as the request of VDC, municipality or a district. If a VDC level water supply, sanitation and hygiene co-ordination committee (V-WASH-CC) requests for declaration of ODF, district water supply, sanitation and hygiene co-ordination committee (D-WASH-CC) manages to monitor the situation of VDC against the above conditions. If a municipality requests for declaration of ODF through municipality level water supply, sanitation and hygiene (M-WASH-CC), district water supply, sanitation and hygiene co-ordination committee (D-WASH-CC) manages to monitor the situation of VDC against the above conditions. Similarly, if a district requests for declaration of ODF through district water supply, sanitation and hygiene co-ordination committee (D-WASH-CC), regional water supply, sanitation and hygiene co-ordination committee (R-WASH-CC) manages to monitor the situation of VDC against the above conditions.

According to the government records, Ekata Chowk of Morang district is the first settlement of Nepal declared ODF in October, 2004; Panch primary school of Kapilvastu is the first school declared ODF in 2005; Pragatinagar VDC is the first VDC declared ODF on May 11, 2007; Dharan of Sunsari and Ratnagar of Chitwan were the first two municipalities declared

ODF in the same day of March 23, 2011. Similarly, Kaski is the first district declared ODF on June 24, 2011 (Sah, 2013, DWSS/ESDMS, 2013). Though there are many institutions and local administrative bodies which have already been declared ODF, there is a question of sustainability. The problems are of diverse in nature. Some of the problems are: management, awareness and post ODF programmes in the area (Sah, 2013). Similarly, lack of technical supports and use of construction techniques, lack of proper planning and implementation and poor behavioral attitude (i.e. defecating at open places and negligence of proper sanitation habit) are major management related problems for sustainability (Devkota, 2011).

SACON 2015, ODF campaign is held by enforcing strategic plan on sanitation. The strategic plan consists of target, strategies, mapping of stakeholders and resources, social norms and code of conducts, promotional actions, and plan of action and monitoring arrangement. Participatory interactions and discussions are held among stakeholders in the strategic planning process. All districts have enforced strategic plan for ODF. However, all VDCs and municipalities have not formulated it though they have been conducting ODF campaigns. All ODF declared districts, municipalities and VDCs have not developed strategic plan on total sanitation. These days, formulation of 'WASH Plan', 'Water Users' Master Plan' and 'City Wide Sanitation Plan' is also getting popular. The DWSS is planning to introduce 'Sanitation Safety Plan' which was discussed during 6th South Asian Conference on Sanitation held in Bangladesh in 2015.

WHO and UNICEF (2004) the basic needs of people such as safe water, improved hygiene and sanitation must be fulfilled for a dignified life of human being (Devkota, 2011). However, people in many parts of the world have not got the sanitized condition and have been living in a non-hygienic condition. About 35% (2.5billion) populations in the world lack access to improved sanitation. It indicates that there is not the sanitized situation for all in the world. The poor sanitation condition causes diseases such as diarrhea, dysentery, cholera, hepatitis, worms, and schist osmosis, which are the barriers to improve the livelihood and living standards of the people in the developing and under-developed countries (Sah, 2013).

(SHMP, 2011), The Sanitation and Hygiene Master Plan (SHMP) was felt necessary in order to accelerate the pace of the progress along with the objectives such as synergize the efforts, generate and maximize local resources, reduce the gap between access to drinking water and sanitation, provide guidance to achieve national goal, support to mainstream the concept of

total sanitation into national development agenda, support to national commitments South Asian Conferences, etc. (GoN, 2011; Sah, 2013). The guiding principles of SHMP were: ODF as the bottom line, universal access to toilet in water supply project, technology of household toilet (permanent/temporary), mainstreaming of local bodies, universe of program intervention, user's friendly facilities in institutions, mandatory provision of toilets in new residents/offices (SHMP, 2011).

CHAPTER III:

RESEARCH METHODOLOGY

3.1 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, field visit and observation, and key informant interview along empirical field studies were done to collect data from the field.

3.2 Rational of the study Area

Chilkhaya Village Development Committee as shown in figure 3.1 is situated in the North East of Kalikot District.

Chilkhaya VDC is one of the Eighteen ODF declared VDC in the Kalikot District, with 817 household have temporary toilets and 6 household have permanent toilets. All the

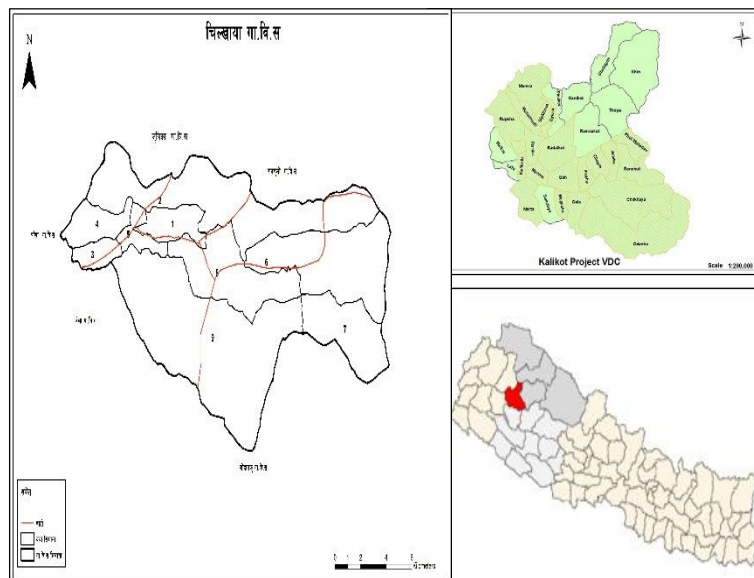


Figure 3.2 Map of Chilkhaya VDC

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 609 household have permanent toilets and 208 households have temporary toilets out of 817 household (VWASH Plan 2013)

3.3 Sources of Data collection

The primary data were collected from interview survey. Secondary data were also studied, acquired from different reports, published and unpublished documents, presentations, from individuals, experts and organizations related to environment and related websites.

3.4 Population, sampling size and sampling procedure

The sampling unit for the study was the household. While conducting the study in the VDC, total household of nine wards constituted of quota sampling and simple random method is used to select the local HHs. The details of selecting the sample are shown in following table:

Table 3.4 Number of Household Samples Distributions across the Wards

Ward Number	1	2	3	4	5	6	7	8	9	Total
Households	118	158	101	59	86	90	38	51	116	817
Percentage	14%	19%	12%	7%	11%	11%	5%	6%	14%	100
Quota sample (117 HHs)	17	23	14	8	12	13	6	7	17	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.

3.5 Primary Data Collection

The structures questionnaire or unstructured interviews and observation methods was applied to generate the primary data.

3.5.1 Household Survey

A set of questionnaires was prepared and directly administered to the household. The questionnaire contained the questions mainly focused on the activities conducted after ODF declaration. The questions was prepared based on Sanitation and Hygiene Master Plan and those related to WASH service level.

3.5.2 Field Visit and 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.

3.5.3 Key Informant Interview

The study had undertaken the structured, semi-structured and unstructured interview to explore the information on post open defecation free zone declaration and its impacts on both household and community level and analyze driver & barrier, and change & achievement for total sanitation. For these, the study was based on interviews with political leader, key members of W-WASH-CC, women health workers, key members of V-WASH-CC, social leaders, key person of youth club, and government officials like official of primary health center, area police office etc. The study recorded their interviews in the audio. These interviews are transcribed and translated in the field.

3.6 Secondary Data Collection

Relevant books, articles, journals, project reports, guidelines were reviewed for necessary information. Data from VDC, project working in WASH sector NGOs and information collected from the literature review of both published and unpublished literatures were used as the secondary information for the analysis and interpretation. Water supply and sanitation service level of whole VDC was taken from VWASH Plan of Chilkhaya VDC.

3.7 Data Analysis

In the process of data analysis the research classify and tabulate data, which he has collect through the various sources, in this study data collected and tabulated manually. For different types of data different tables are prepared. Simple statistical tools are used such as percentage, average, frequency, bar diagrams and pie chart. To fulfill the objectives of the study, data is analyzed descriptively.

The report presents the findings through simple 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 3.7 below shows format for sample household sanitation status with the detailed households documented is provided in annex 2.

Table: 3.7 Format for Sanitation status at household level.

S.N.	House owners Name	Regular use of Toilet	Personal Cleanliness	Access and use of Minimum required safe water	Use of Safe food	Cleanliness of inside and outside of household	Is ready for total Sanitation Declaration
		Yes(1) /No (0)	Yes(1) /No (0)	Yes(1) /No (0)	Yes(1) /No (0)	Yes(1) /No (0)	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-IV

PRESENTATION AND ANALYSIS OF DATA

4.1 General Background of the Study Area:

Kalikot is a remote district of karnali Zone. It lies in Mid-western Development Region. This district also called younger district of Nepal. District covers 29 o 5' North to 29o 28' Northern latitude and 81o 28' east to 82o 2' longitude in Nepalese map. Altitude of district ranges from 738 m to 4790 m. Area occupied by this district is 1741 sq Km. Politically district divided in to 1 constitutional area, 9 Ilaka and 30 VDCs. According to 2011 census, Kalikot district is populated by 1, 36,948 person with average density of 79 sq. km person per square kilometer. Kalikot district has 30 VDCs.

The study site Chilkhaya VDC is situated in the southeast part of the kalikot district. This is bordered with Ranchuli VDC in east Odanaku VDC in south and Chhappre and Pankha North and Gela VDC in the west part. It covers 3578.33 hector of total area. It is located in southeast part of kalikot district. The name of VDC is named after the name of eagle story. Its height about 1500 to 2500 meters form sea level. Subtropical climate can be found in this region.

4.1.1 Demography

Total population of this VDC is 4654 with female and male population of 2349 and 2305 respectively. The percentage of population who, solely depend upon agriculture in 70%. About 26 percent of the people in this VDC are found engaged in business whereas about 4% are engaged in jobs (VDC Profile, 2068 BS). Different castes of people are residing in the study site. Brahaman-Hill, Chhettir, kami,Damai/Dholi, Thakuri and Sarki community people are residing in Chilkhaya VDC. Some data on demographic scenario are given in Table.

Table: 4.1.1 Households and cast-wise Information of VDC

Ward No	HH Caste			
	Dalit	Janajati	Bramin/Chhettir	Total
1	44	0	74	118
2	50	0	108	158
3	9	0	92	101
4	13	0	46	59
5	37	0	49	86
6	0	0	90	90
7	0	0	38	38
8	0	0	51	51
9	6	0	110	116
Total	159	0	658	817

4.1.2 School and Institutional Toilets

In this VDC all school and institution have toilet facility with some of them have user friendly toilets as shown in table 4.1.2 below

Table: 4.1.2 School and Institutional toilets

S.N.	School and institution Name	Toilet (Y/N)	Use of Toilet (Y/N)	Water Facility (Y/N)	Gender Friendly (Y/N)	Differently able friendly (Y/N)
1	Siwalya HS School	Y	Y	Y	Y	Y
2	Rastrya LS School	Y	Y	Y	Y	Y
3	Jaganath LS School	Y	Y	Y	Y	N
4	Mahadev LS School	Y	Y	Y	Y	N
5	Health Post Office	Y	Y	Y	Y	Y
6	Animal Sub-Service Center	Y	Y	Y	Y	Y
7	AgricultureSub-Service Center	Y	Y	Y	Y	Y
8	VDC Office	Y	Y	Y	Y	N
9	Kalika Primary School	Y	Y	Y	Y	N
10	Janata Primary School	Y	Y	Y	Y	N
11	Masta Primary School	Y	Y	Y	Y	N
12	Mahadev Primary School	Y	Y	Y	Y	N
13	Malika Balbiksa Kendra	Y	Y	Y	Y	Y
14	Siwalya Balbikas Kendra	Y	Y	Y	Y	Y

4.2 Open Defection Free Initiatives in Chilkhaya Village Development Committee

Chilkhaya VDC stand as the eighteen ODF declared VDC within Kalikot 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 chilkhaya VDC date back to 2010 but promotion of sanitation has been accelerated after the intervention of different water supply and sanitation project with the support of which the VDC was declared ODF after awareness program 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 817 and 609 households' constructed temporary and permanent toilet respectively the figure 4.2 below shows the ODF declaration process of VDC followed by VDC. The adopted procedures for the declaration at time was similar to the present ODF declaration procedures as explained under sub section 4.2

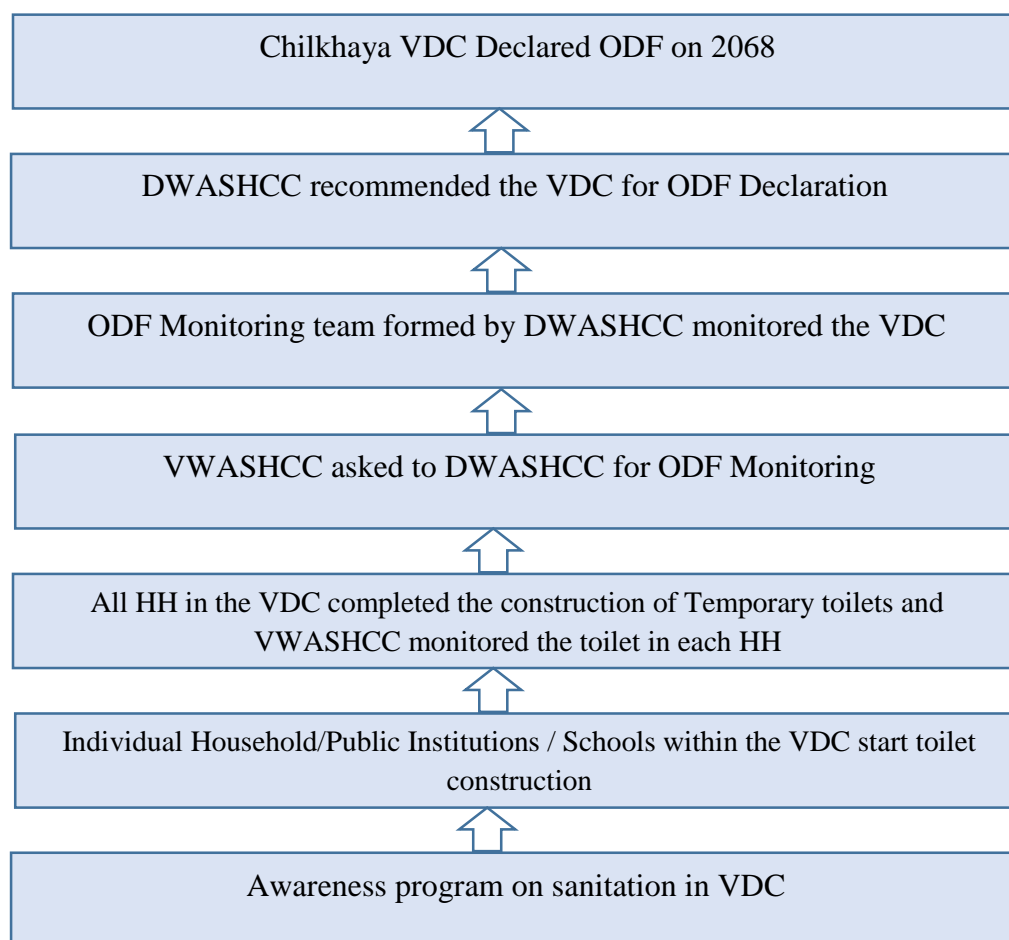


Figure 4.2 Open Defecation Free (ODF) Declaration Process of Chilkhaya VDC

4.3 Post ODF Status of Chilkhaya 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, 2017).

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%).

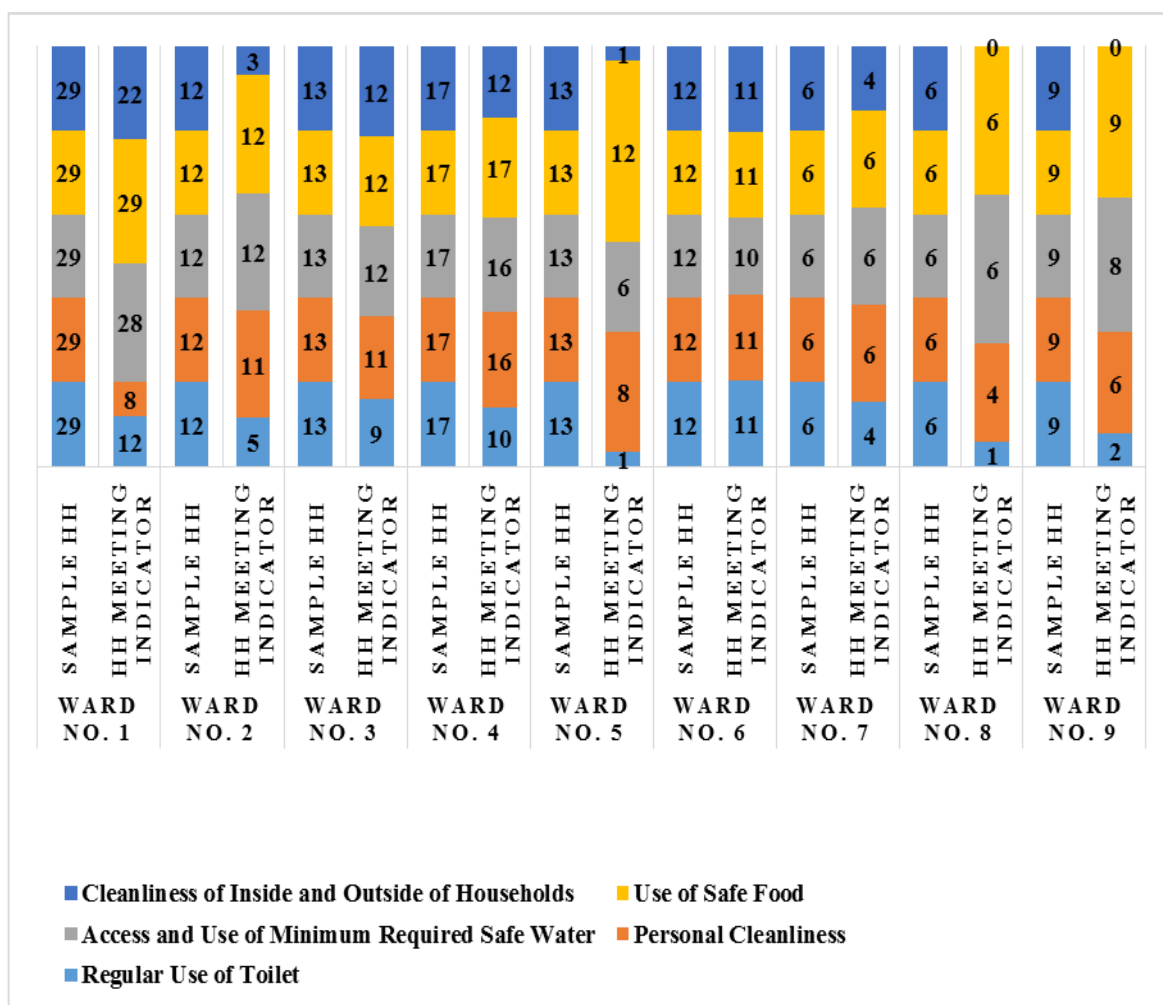


Figure: 4.3 Post ODF Status of Chilkhaya VDC

4.4 Present Water Supply Sanitation and Hygiene (WASH) Service Level

4.4.1 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).

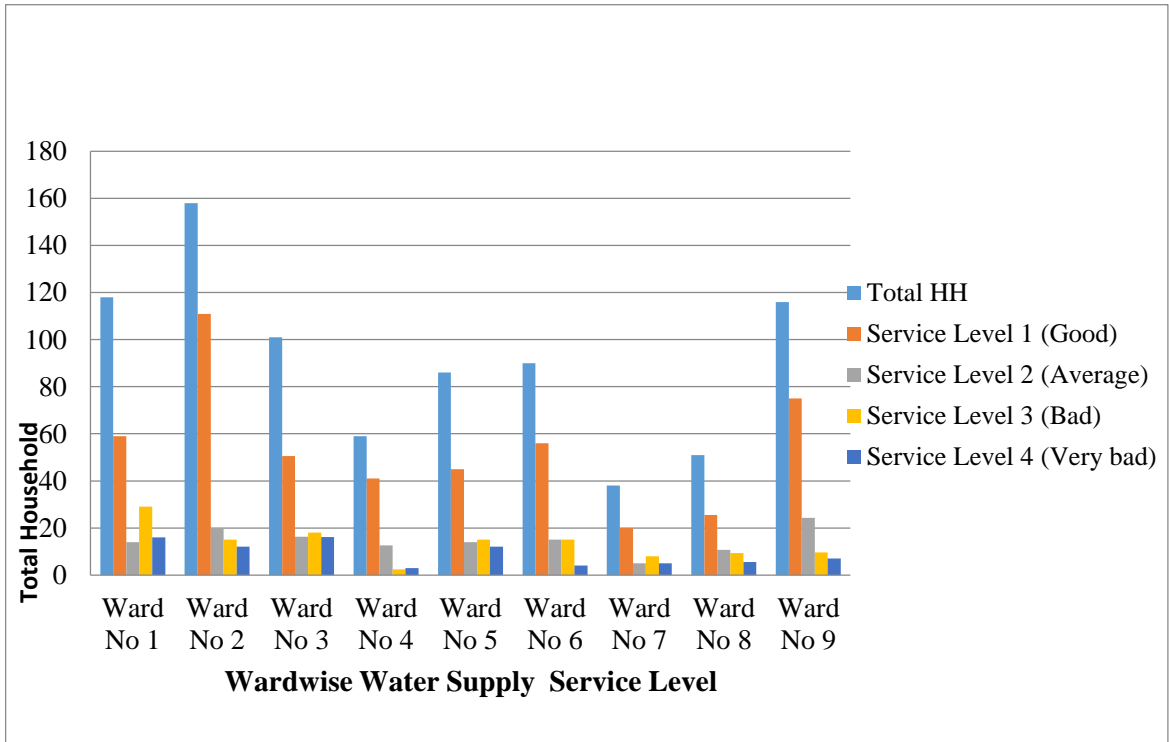


Figure 4.4. Water service level at ward level of Chilkhaya VDC

Out of 817 household in the VDC 483 household had water service level; 132 household had water service level 2 ; 121 household had water service level 3 and 81 household had water service level 4 as shown in figure 4.4.1 below:

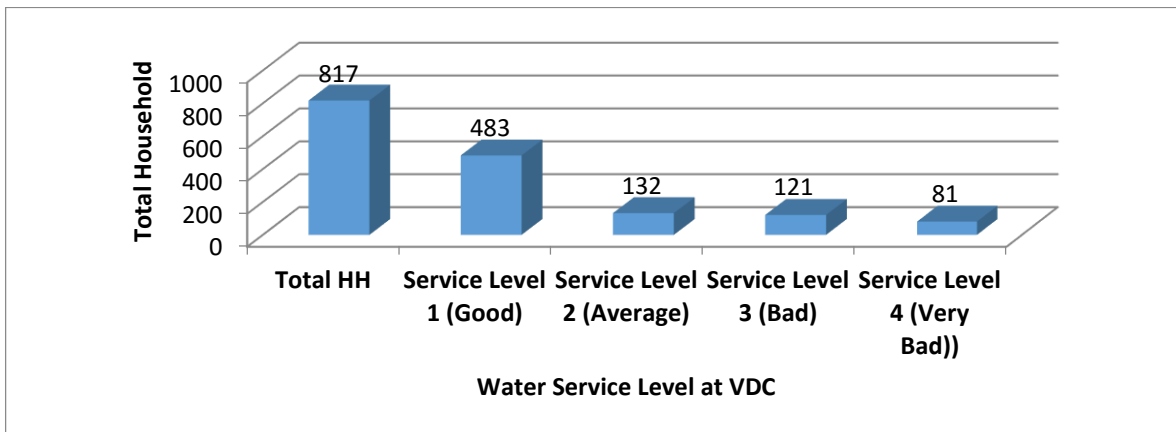


Figure 4.4.1 Water Service Level at VDC

(Source: VWASH Plan, 2015)

4.4.2 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 4.6 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.

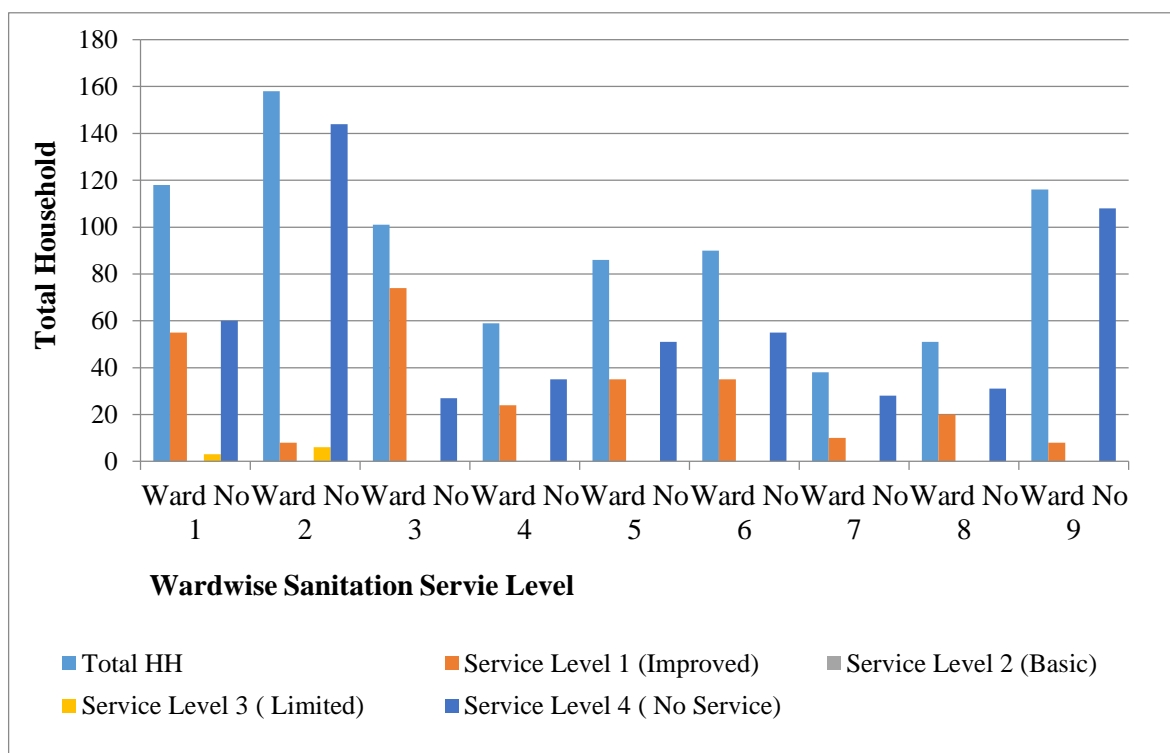


Figure 4.4.2 Ward wise Sanitation Service Level

In total the whole VDC sanitation level can be described as shown in figure 4.4.2 alongside. Out of 817 household 269 household had sanitation service level 1, 9 household had sanitation service level 3 and 539 household had sanitation service level 4 (Field Survey, 2017).

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

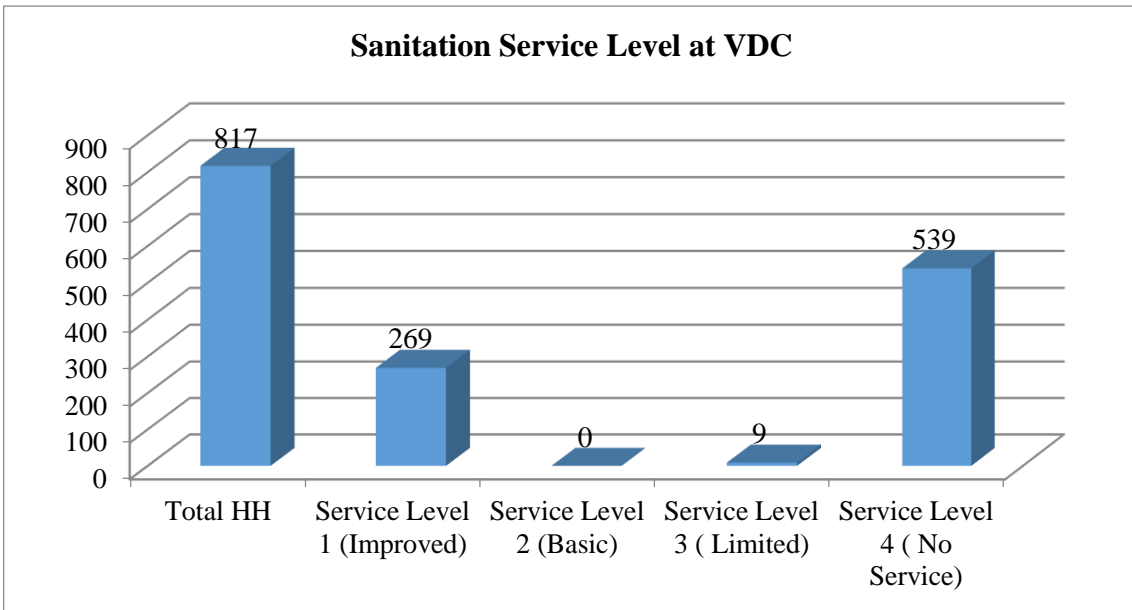


Figure 4.4.2 Sanitation Service Level in VDC

4.4.3 Hygiene Service Level

Ward wise hygiene service level is assessed in sampled household only and shown in figure 4.8 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%).

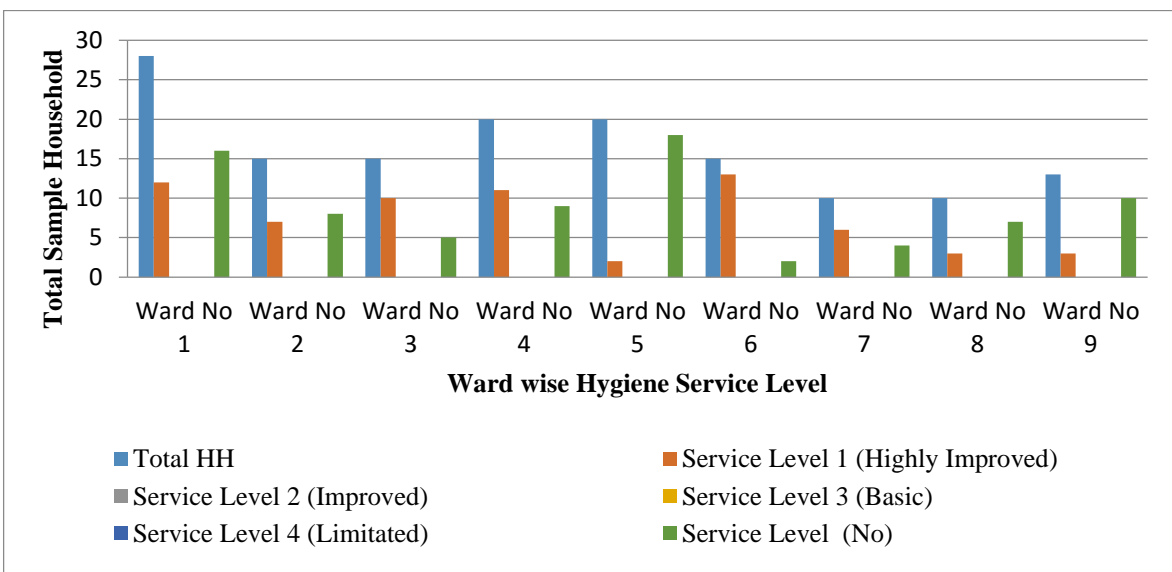


Figure 4.4.3 Ward wise Hygiene Service Level of VDC

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 service is the lack of toilets.

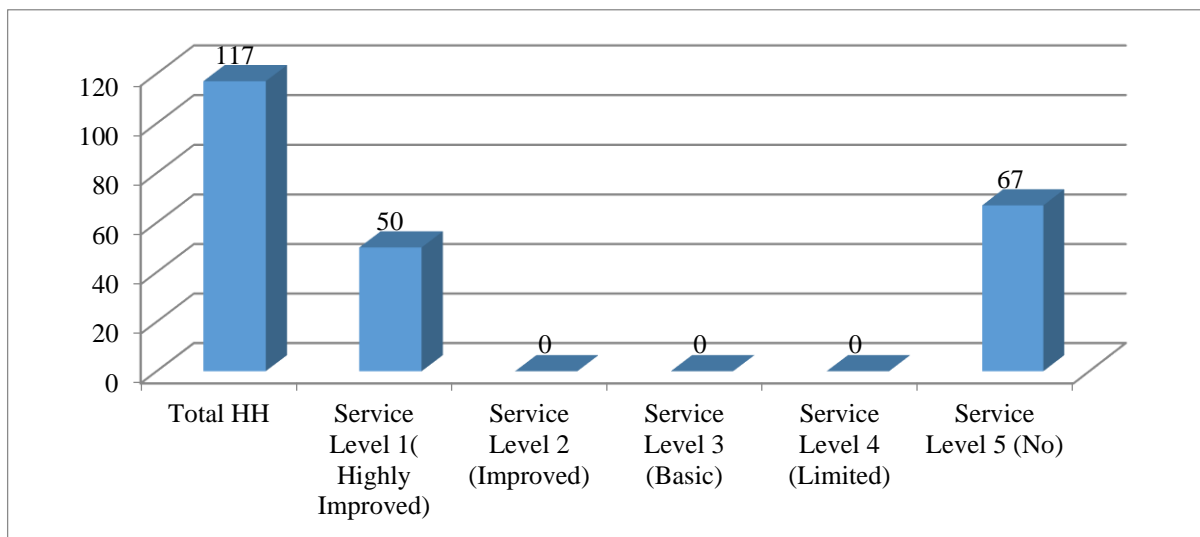


Figure 4.4.3.1 Hygiene Service Level at VDC

4.5 Change and Achievement made after ODF Declaration in VDC

Change brought and achievement made on Water, Sanitation and Hygiene sector after ODF declaration of VDC are discussed in following ways (KII, 2017):

60% of total household in VDC are benefitted from water service level 1 (Good) and demanding for other household water service level improvement. For this, VDC has played an important role and had prepared VWASH plan and updated it recently.

Temporary toilet were constructed by each household for the ODF declaration of the VDC but couldn't sustain in ODF. For sustaining the ODF, now 269 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.

4.6 Drivers and barriers towards Total Sanitation declaration

4.6.1 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 WWASH CC responsibility is given to Ward citizen forum (WCF) by V-WASH-CC and mobilized in ward level for WASH activities.

4.6.2 Barriers of Total Sanitation

Still the VDC is facing the problem of open defecation i.e. 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 Filed visit and observation, from upper part of VDC told that few people in the study area blame them in receiving some sort of funds (or subsidies) from VDC/Government to construct toilets. 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.

4.7 Achieving of VDC towards total sanitation

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

4.7.1 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:

Total of sample 117 households, only 55 household were found using toilet regularly, 81 household are maintaining personal hygiene, 104 household 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 4.7.1 below shows the total sanitation status of VDC.

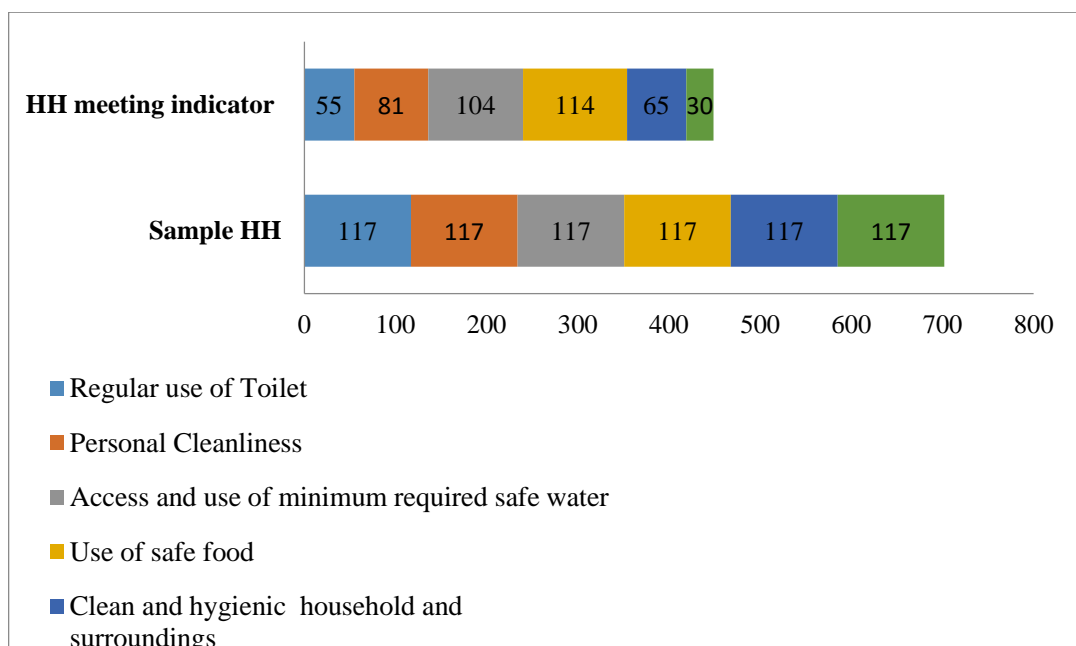


Figure 4.7.1 Total sanitation status of Chilkhaya VDC

Table 4.7.1 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 Toilet	1	All members are using safe toilets	55	55	30
	2	Toilet is regularly cleaned	55		
	3	Access and available of soap and water for hand washing after using toilet	58		
2.Personal cleanliness	1	Practice of hand washing with soap at critical times	81	81	
	2	Cleanliness of mensuration	96		
	3	Other hygiene activities (bathing, Tooth brushing, Cutting nails etc.)	17		
3.Access and use of minimum required safe water	1	Water storage and clean water vessel and covered	104	104	
	2	Use of water from covered well, hand pump and protected source	109		
4.Use of safe food	1	Use of clean cooking pot, clean kitchen and Covered foods	114	114	
	2	Taking meal after well cooking	115		
	3	Safe storage of food and not using of outdated foods	117		

	4	Using of safe nutritious food for cooking and clean the foods which can be eaten without cooking.	114		
5.Clean and hygienic household and surroundings	1	Regularly cleaning inside and outside of household	78	65	
	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 animals waste management	104		
	5	Smokeless Kitchen (Improved stove, smokeless stove, Bio-gas stove, Gas Stove)	65		

CHAPTER –V

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

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 Kalikot District. The VDC was declared ODF with the support of various development organizations working in the district since 2010. 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 of 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 Chilkhaya 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.

5.2 Conclusion

The Sanitation and Hygiene Master plan focuses on the achievement of Open Defecation Free (ODF) zones and universal access to toilets, this should happen through a total sanitation approach. The study has analyzed the effectiveness of post ODF status, sanitation and hygiene service level, change and achievement made after ODF declaration, drivers and barriers towards total sanitation and present total sanitation status of the study area. The findings of the study following conclude the following points:

- 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 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 respectively.

- ODF movement through V-WASH-CC 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 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 not sure when.
- The study concluded basically two types of problems one is related to technical and other is behavior change. Technology problem is construction of temporary toilets which were damaged immediately after ODF declaration (not more than 4 months) and behavior related problem is the use of toilet properly with is proper operation and maintenance.
- One toilet is for one household is also sometime not sufficient for those having joint family, 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.

5.3 Recommendation

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

- Regular monitoring and support seems necessary from V-WASH-CC to prevent household slip back to open defecation and enhancing the WASH service levels towards total sanitation.
- VDC/V-WASH-CC 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 organizations working in the WASH sector.
- Not only permanent plinth structure, but privacy in using toilets should be maintained properly by superstructures form sustainability point of view.

REFERENCE

- DoLIDAR. (2011). *Rural Water, Sanitation And Hygiene (WASH) Approach Paper*: Government of Nepal.
- IRC. (2011). *Assessing Sanitation, Sanitation Service Level*. IRC international water and Sanitation.
- Dahal, K.R. Adhikari. B.& Tamang ,J (2014) *Sanitation Coverage and Impact of Open Defecation Free (ODF) Zone With Reference to Nepal: A Review*, International Journal of Engineering Research and Application. Vol. 4 issue, PP. 118-128.
- Mukherjee, N. (2012). *Factors associated with achieving and sustaining Open defecation Free Communities*. Learning from East Java.
- Neupane, A. (2001). *A Report on National Sanitation Action Week Kathmandu*: Steering Committee for National Sanitation Action Week.
- NPC. (2012). *Millennium Development Goal (MDG) Acceleration Framework*, Kathmandu: National Planning Commission.
- Government of Nepal. (2016). *Nepal Water Supply Sanitation and Hygiene Sector Development Plan*. Kathmandu Nepal.
- NPC. (2015). *National (Preliminary) Report of the Sustainable Development Goals (2016-2030)*. Kathmandu Nepal.
- NSHCC. (2013). *Sanitation and Hygiene Master Plan Implementation Guideline* (draft). Kathmandu: NHSCC Nepal.
- NMIP/DWSS. (2014). *Water and Sanitation Status Report*. Kathmandu: National Management Information Project.
- Plan Nepal. (2012). *Assessment of Total Sanitation (ODF movement) Program through LCTS approach*. Kathmandu: Plan Nepal.
- SACOSAN-V. (2013). *5th South Asian Conference on Sanitation*. Nepal.
- Sah. R.C. (2013). *Sustainability Challenge of Open Defecation Free Zone in Nepal SHMP* (2011). *Sanitation and Hygiene Master Plan*. Government of Nepal
- VWASH Plan. (2015). *Village Water supply Sanitation & Hygiene Plan*. Chilkhaya VDC.
- Water Aid. *Sustainability and Equity Aspects of Total Sanitation Programs*. Kathmandu.
- WHO and UNICEF. (2004) *Joint Monitoring Program for Water Supply & Sanitation*. Kathmandu: Government of Nepal.

Adhikari. K. (2012). *Implementation of the Sanitation and Hygiene Master Plan 2011: Opportunities and Challenges*. A Journal of Water, Sanitation, Health and Environment Published by SOPHEN (Volume: 10, Number: 1, Page: 14-19, ISSN-2091-0851).

(DWSS). (2011). *Total Sanitation Model VDC Program*. Kathmandu Nepal.

Government of Nepal (GoN). (2011). *Sanitation and Hygiene Master Plan*.

NMIP/DWSS. (2011). *Nationwide Coverage and Functionality Status of Water Supply and Sanitation in Nepal*.

NMIP/DWSS. (2014). *Nationwide Coverage and Functionality Status of Water Supply and Sanitation in Nepal*. Kathmandu Nepal.

RWSS-WN Phase II. (2016). *Open Defecation Free-Is it truly*. RWSS-WN II Brief 6-2016.

Sector Efficiency Improvement Unit (SEIU)/Ministry of Physical Planning and Works (MPPW) 2011. *WASH Sector Status Reports*.

UNICEF. (2015). *One WASH Annual Report*. Kathmandu Nepal.

Annex 1 Questionnaire

1. Questionnaire

Post Open Defecation Free Zone Assessment of Chilkhaya Villlage Development Committee, Kalikot

General Information

Name of Respondent: Male/Female	Age:	Sex:
Total Member: Male	Female	Ward:

Section I : Water Service Level Indicators

1.1 How much 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 months b) >11 month <12 month c) >10 month > 11 month 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 2069?

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 construction and how did it improve your daily life?

Use of toilet:

2.5 Dose 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 leaning?

a. Daily

b. Twice a week

c. Weekly

d. 15 days a month

e. Monthly

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

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

Section III. Personal Hygiene

3.1 Do you wash your hand after toilet use?

a) Yes b) No

If yes, with or without soap?

3.2 When do you wash your hand?

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 personal hygiene?

a) Yes b) 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 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 food safely?

Yes Sometime No

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

Section VI : Household Sanitation

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

Daily Ones 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 of your household?

- How do you manage the liquid waste of your household?

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 kitchen? (Improved stoves/smokeless stoves/ bio gas stoves/ LPG stoves)

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

S.N.	Ward	S.N.	House Owner's Name	Regular use of toilet	Personal Cleanness	Access and Use of Minimum Required water	Use of safe food	Cleanness of Inside and outside of Households	Is Ready for Total sanitation declaration?
				Yes (1)/No (0)	Yes (1) /No (0)	Yes (1)/ No (0)	Yes (1)/ No (0)	Yes (1)/ No (0)	Yes (1) /No (0)
1	1	1	Kali Bahadur Khattri	1	1	1	1	1	1
2		2	Laxmi Maya Khaattri	1	1	1	1	1	1
3		3	Gangadevi Kahattri	1	1	1	1	0	0
4		4	Kala Kahattri	1	1	1	1	0	0
5		5	Maya Khattri	1	1	1	1	0	0
6		6	Aakal Khattir	1	1	1	1	0	0
7		7	Aamma Khattri	0	0	1	1	0	0
8		8	Nanada Katuwal	0	0	1	1	1	0
9		9	Prean Katuwal	0	0	1	1	1	0
10		10	Harsha Katuwal	1	0	1	1	0	0
11		11	Gorkha Katuwal	0	0	1	1	1	0
12		12	Shanti Katuwal	1	0	1	1	1	0
13		13	Mun Katuwal	1	0	1	1	1	0
14		14	Tula Katuwal	1	0	1	1	1	0
15		15	Shova Katuwal	1	0	1	1	1	0
16		16	Sire Katuwal	0	0	1	1	1	0
17		17	Birkha Sunar	0	0	1	1	1	0

18		18	Mureli B.K.	0	0	1	1	1	0
19		19	Hari Katuwaal	0	0	1	1	1	0
20		20	Ramsaran Katuwal	0	0	1	1	1	0
21		21	Partihimal Khattri	0	0	1	1	1	0
22		22	Jaya Bahadur Khattir	0	0	1	1	1	0
23		23	Dhan Katuwal	0	0	1	1	1	0
24		24	Tirtha Sunar	0	0	1	1	1	0
25		25	Gita Bishwokarma	0	0	1	1	1	0
26		26	Dalli Bishokarma	0	0	1	1	1	0
27		27	Sukuman Sarki	0	0	1	1	1	0
28		28	Munrup Kattri	0	0	1	1	1	0
29		29	Lalsing Kahtrri	1	1	0	1	1	0
30	2	1	Tilak Neupane	0	1	1	1	1	0
31		2	Rajan Neupane	0	1	1	1	0	0
32		3	Sirjana Neupane	0	0	1	1	0	0
33		4	Rana Damai	0	1	1	1	0	0
34		5	Gokule Kami	0	1	1	1	0	0
35		6	Shiva Lal Khattri	1	1	1	1	0	0
36		7	Gangan Khattri	1	1	1	1	0	0
37		9	Munbere Luhar	1	1	1	1	0	0
38		10	Kali bahadur Khattri	0	1	1	1	0	0
39		11	Raju Khattri	1	1	1	1	1	1
40		12	Shayam Lal Khattri	1	1	1	1	1	1
41	3	1	Chakkra Shahi	0	1	1	1	0	0
42		2	Hasta Shahi	0	0	0	0	0	0
43		3	Namaraj Shahi	1	1	1	1	1	1

44		4	Raju Shahi	1	1	1	1	1	1
45		5	Tek Raj Shahi	0	0	1	1	1	0
46		6	Kalam Bhadur Shahi	1	1	1	1	1	1
47		7	Lok Bahadur Shahi	1	1	1	1	1	1
48		8	Shinga Shahi	1	1	1	1	1	1
49		9	Dhan Raj Shahi	1	1	1	1	1	1
50		10	Raja Bhadur Shahi	1	1	1	1	1	1
51		11	Narendra Shahi	0	1	1	1	1	0
52		12	Aamma Shahi	1	1	1	1	1	1
53		13	Ratan Shahi	0	1	1	1	1	0
54	4	1	Pream Rana	1	1	1	1	1	1
55		2	Dhanrup Rana	1	1	1	1	1	1
56		3	Parbala Rana	1	1	1	1	1	1
57		4	Muna Rana	0	0	1	1	1	0
58		5	Lalte Rana	0	1	1	1	1	0
59		6	Dharma Shahi	0	1	1	1	1	0
60		7	Gorkha Rana	1	1	1	1	1	1
61		8	Kumma Shahi	1	1	1	1	0	0
62		9	Birkha Shahi	0	1	1	1	1	0
63		10	Takka Shahi	0	1	0	1	1	0
64		11	Guiya Shahi	1	1	1	1	1	1
65		12	Latya Shahi	1	1	1	1	1	1
66		13	Jaya Bhadur Shahi	0	1	1	1	1	0
67		14	Gogan Shahi	1	1	1	1	0	0
68		15	Naya Bhadur Shahi	1	1	1	1	0	0
69		16	Sur Bahadur Shahi	1	1	1	1	0	0

70		17	Rajani Shahi	0	1	1	1	0	0
71	5	1	Chhkra BK	1	1	1	1	1	1
72		2	Khamma BK	0	0	1	1	0	0
73		3	Nanadasur BK	0	0	0	1	0	0
74		4	Dadimale BK	0	1	0	1	0	0
75		5	Parbae BK	0	0	0	1	0	0
76		6	Kamal Shahi	0	0	0	0	0	0
77		7	Debendra Shahi	0	1	0	1	0	0
78		8	Rai Bahadur Shahi	0	1	0	1	0	0
79		9	Sura Bhadur Shahi	0	0	1	1	0	0
80		10	Krishna Shahi	1	1	1	1	0	0
81		11	Manoj Shahi	0	1	1	1	0	0
82		12	Pauna Shahi	0	1	1	1	0	0
83		13	Tula Shahi	0	1	1	1	0	0
84	6	1	Munal Thapa	0	1	0	1	1	0
85		2	Parek Thapa	1	1	0	1	1	0
86		3	Bhairab Thapa	1	1	1	1	1	1
87		4	Bir Bhadur Thapa	0	0	0	1	0	0
88		5	Raja Thapa	1	1	1	1	1	1
89		6	Nara Bhadur Thapa	1	1	1	1	1	1
90		7	Tulki Thapa	1	1	1	0	1	0
91		8	Akbare Thapa	1	1	1	1	1	1
92		9	Tej Bhadur Thapa	1	1	1	1	1	1
93		10	Shing Thapa	1	1	1	1	1	1
94		11	Sukabire Thapa	1	1	1	1	1	1
95		12	Dadimal Thapa	1	1	1	1	1	1

96	7	1	Ramesh Rokaya	1	1	1	1	1	1
97		2	Ali Rokaya	1	1	1	1	1	1
98		3	Satisha Rokaya	1	1	1	1	0	0
99		4	Dhan Bhadur Rokaya	0	1	1	1	1	0
100		5	Pulti Rokaya	1	1	1	1	1	1
101		6	Kanchhi Rokaya	0	1	1	1	1	0
102	8	1	Ram Bhadur Rana	1	1	1	1	0	0
103		2	Nanda Lal Rana	0	1	1	1	0	0
104		3	Basanta Rana	0	0	1	1	0	0
105		4	Lalit Rana	0	0	1	1	0	0
106		5	Gokule Rana	1	1	1	1	0	0
107		6	Kanchhi Rana	0	1	1	1	0	0
108	9	1	Rabi Damai	0	1	1	1	0	0
109		2	Dane Damai	0	1	1	1	0	0
110		3	Khadke Dmai	1	1	1	1	0	0
111		4	Jagat Shahi	0	1	1	1	0	0
112		5	Topa Bhadur Shahi	0	1	1	1	0	0
113		6	Pream Shahi	0	0	1	1	0	0
114		7	Khamma Shahi	0	1	0	1	0	0
115		8	Mali Shahi	0	0	1	1	0	0
116		9	Pampha devi Shai	0	0	1	1	0	0
117		10	Mohan Shahi	1	1	1	1	0	0
			Total (Yes)	55	81	104	114	65	30

Annex 3: Field Visit and Observation Checklist

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. (Observation)

Annex 4: Key informant Interview Questionnaire

1. What are the changes brought by ODF?
2. What are your impressions about the toilet construction and how did it improve your daily life?
3. What do you do for the maintenance of toilet?
4. Dose everyone in the family use the toilet?
5. Do your clean the toilet in everyday?
6. Do you have hand washing arrangement in the toilet?
7. Do you wash your hand after use toilet?
8. How do you maintain your personal hygiene?
9. Dou you clean utensils and covered food in your kitchen?
10. How secured is the water sources for your consumption?
12. Dou you regularly clean inside and surroundings of your households?
13. How to ODF sustain and promotion of total sanitation?

Annex.5 Photograph



Figure 1 Photo of study area



Figure 2 Water supply service in VDC



Figure 3 Utensil draying rack



Figure 4 Permanent Toilet