Community Led Total Sanitation Programs & Practices: An Impact Study of CLTS Program in Jugathapachaur VDC, Jajarkot

A Thesis Submitted to
The Central Department of Rural Development,
Tribhuvan University
in partial fulfillment of the requirements for the
Degree of the Master of Arts (M.A.)
in
Rural Development

By
Kanta Shah
Central Department of Rural Development
Tribhuvan University, Kirtipur, Kathmandu
T.U. Reg. No.:21854-94
Exam Roll No. 282131/68
January, 2015

`

RECOMMENDATION LETTER

This thesis entitled "**Community Led Sanitation Programs & Practices**: **An Impact Study of CLTS Program in Jugathapachaur VDC, Jajarkot**", has been prepared by Kanta Shah under my supervision and guidance. This work is the outcome of her own intensive and independent research work and has been prepared in the format as required by the faculty. I hereby recommend this dissertation for approval and acceptance.

_____

Prof. Dr. Chandra Lal Shrestha
(Supervisor)
Central Development of Rural Development
Faculty of Humanities and Social Sciences
Tribhuvan University, Kirtipur

Date:

`

APPROVAL LETTER

This is to certified that a dissertation entitled **Community Led Sanitation Program & Practices: An Impact Study of CLTS Program in Jugathapachaur VDC, in, Jajarkot Nepal** written and submitted by Mrs. Kanta Shah has been examined by department of the Rural Development. It has been declared a successful work for fulfillment of the academic requirement towards the completion of the degree of (M.A.) Master of Arts in Rural Development.

Evaluation Committee

.....
Prof. Dr. Chandra Lal Shrestha
Supervisor & Head of Department

……
Prof. Dr. Mangala Shrestha
External Examiner

Date: 2015-02-02
(2071-10-19)

`

ACKNOWLEDGEMENT

I am deeply indebted to Prof. Dr. Chandra Lal Shrestha Head, Central Development of Rural Development Tribhuvan University, Kirtipur, for his proper guidance and supervision which made it possible to complete this Dissertation

I am also highly indebted to my friend Mrs. Rekha Chand for assisting and giving me helpful suggestions to start this research work.

Specially, I would like to offer my gratitude to all respondents of Jugathapachaur VDC of Jajarkot for them support during data collection period in CLTS sites and preparing this research document in time.

Finally, heartfelt thanks go to my spouse Mr. Janak Bahadur Shahi whose regular support in reducing workload, and making me free in study to perform this research work within stipulated time frame.

Kanta Shah

`

ABSTRACTS

This thesis entitled ***Community Led Total Sanitation Programs and Practices: An impact study of CLTS program in Jugathapachaur VDC, Jajarkot*** *was targeted to examine to community Led Sanitation program and practices with specific objectives. The objectives of the study were i) to analyze the previous hygienic knowledge of the study population ii) to analyze the community participation and involvement for CLTS practice iii) to identify the positive as well negative impacts after CLTS program.*

The research design of this study was both descriptive and analytic. Regarding the sample size of the 50 households, 25 households have been chosen to make the study more specific. Different methods i.e. household survey, observation and through structured questionnaire were adopted for data collection. The data collected from primary and secondary sources are presented in tables to make comprehensive analysis.

The study has found that in Jugathapachaur VDC, there is practice of open defecation unhygienic behavior and haphazard garbage disposal habits which result in environmental degradation which directly affects the health and quality-life of the people especially the poorest and the most vulnerable people in those regions. This research is focused in learning as well as reflection of community initiative to the VDC through its effectiveness measure from model clusters of CLTS. Similarly, people in this community are not aware about the importance of sanitation so this program was providing its focus on poor vulnerable and socially excluded groups in promoting on access to and control over the resources through the extensive support of community infrastructure and livelihood improvement program.

Therefore, from this thesis, we can conclude that most of the people in the community had mentality being toilet construction without subsidy is not possible, which is not found true. If people really owned the interest all people can construct the required toiled like their house construction by them. To make the program more effective, location of toilet should be accessible to all and people should be made aware of importance of sanitation.

`

TABLE OF CONTENTS

`

`

`

LIST OF TABLES

`

LIST OF FIGURES

`

LIST OF ACRONYMS /ABBREVIATIONS

ADBN	Agricultural Development Bank of Nepal
ARI	Acute Respiration Infection
CLTS	Community Led Total Sanitation
CSP	Community Support Program
DFID	Department for International Development
DWSS	Department of Water Supply and Sewerage
DWSS	Drinking water supply system
ESS	Environmental Sanitation Section
GDP	Gross Domestic Product
GoN	Government of Nepal
INGO	International Non-Governmental Organization
Km	Kilometers
LRPS	Local Resource Persons
MoHP	Ministry of Housing and Physical Planning
MOLD	Ministry of Local Development
MoWR	Ministry of Water Resources
NGO	Non-Governmental Organization
NOD	No Open Defecation
NSW	National Sanitation Week
O&M	Operation and Maintenance
ODF	Open Defecation Free
POs	Partner's Organizations
PPC	Peace Promotion Enters
SCNSA	Steering Committee for national sanitation action
SLTS	School Led Total Sanitation
UGs	User Groups
USAID	United States for Agency International Development
VDC	Village Development Committee
VERC	Village Education Resource Centre
WAB	Water Aid Bangladesh
WG	Women Groups
WLTS	Women Led Total Sanitation
WUG	Water Users Group

`

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Nepal is a landlocked country to have 14 zones and 75 districts with area coverage of 147,181 square kilometers. It is bordered by China in the North and India from south, east and west. The country lies between 80˚4' East to 88˚12 eastern longitude and between 26˚22' north to 30˚27' northern latitude in international globe. The land is spread on approximately 885 kms east- west and 145 kms at its narrowest to 245 kms at its broadest north-south the population of Nepal as for the national consensus of 2001 is 23.4 million with annual growth rate of 2.4 %. Geographically the country is divided into three zones. The snow clad High Himalayas in the northern belt, the Mountainous Region embracing Mahabharata Range in the middle with long terraced slopes leading fertile valleys and subtropical plain land in the down south. These regions differ greatly from one another due to topographical and climatic variations. The Tarai with the elevation of 75 to 300 meters above mean sea level covers an area of about 17 % (25,020 square kilometers) of the total land area of the country. The hill gradually rises to a height of 3,000 m above mean sea level and covers an area of 68 % (100,080 sq km) of the total area of the country. The Himalayas covers an area of 15 % (22,081 sq km) of the total area. It rises up to 8,848 m above mean sea level. People of Nepal living different topography of own country. The perennial snow-fed river, stream originating from formidable High Hills, glacier Lakes and maintaining spring, sky rocketed picks of Himalayas as well as skew- curved long rivers like Mechi, Koshi and Karnali, Bheri are the permanent major natural resources of Nepal. The average density of population i.e. 157 person per kilometer varies differently a from east to west and south to north in higher to lower range. In count, we have 3915 VDCs s and 53 municipalities, 4 sub-metropolitans and 1 Metropolitan city In Nepal.

In above geomorphic area we are cultured by different religion like Hindu, Baudha, Islam, Kirat, Jain, Christain, Sikha, Bahal and others in majority to minority in our society. There are 4253220 households. Most of the households are out of the disposal facility of human excreta. Disposal facilities for human waste are a first line of defense against diseases that are transmitted by contact with faces. The proportion

`

of households using different kinds of toilet facilities is an indicator of basic access to sanitation and good indicators of human development, since, toilet not only contribute to the general hygiene and quality of the life but also often corroborate other socio economic indicators such as education and income. The indicator also provides evidence accessibility or use of toilet facilities. The category of not toilet included the use of either forest or open public / private places for the purpose of daily defecation.

The blown-up results indicate that in Nepal as whole a total of 946953 households (22.68%} had excess to modern toilet, 978829 households (23.45%} to ordinary toilet facility and remaining 2191325 households (52.49%) has no access to any kind of toilet facility

In the present context, sanitation is the burning issue in rural community as well as urban community of Nepal. Due to inadequate sanitation, about 13 thousand children under 5 years are dying because of diarrhea each year (UNICEF). Total Sanitation is not only limited to the construction of infrastructure of drinking water and toilet. Its areas are use of clean and healthy toilets, develop habits to wash hands, practice to cover food and drinking water, use clean water for all domestic works, disrupt the linkage between mouth and fecal through management of personal, domestic and environmental sanitation. Lack of hygienic environment in house and school level, women and children are accelerating in the vulnerable direction. Nepalese people are loosing productive time and expenditure in the absence of good health caused by different sanitation related diseases. Its expenses have been estimated 11 billion rupees annually which is equivalent to 45% of GDP.

According to Nepal's Population and Health Survey-2064, some 90 % of the urban households and 80% of the rural households have access to drinking water supply facilities. Similarly, in sanitation about 37 percent of urban households and 20 percent of rural households are using improved latrines. From the administrative records, it is found that some 77 % of population has access to drinking water, and 46 % of population is using proper latrines.

Globally, there are 4 billion cases of diarrhea per year resulting in 2.2 million deaths, mostly of under 5year-olds. Deaths due to diarrhea constitute between 15-33% of total child deaths under the age of 5 in developing countries - the equivalent of a

`

jumbo jet crashing every 90 minutes. Diarrhea morbidity contributes to malnutrition, loss of productivity and days off school.

Recently this year we have burning example of that, the loss of lives more than 500 fellow citizens in Jajarkot, Rukum, Acham, Humla, Jajarkot, Dailekh, Surkhet, Darchula, are only due to the preventive cause of diarrhea in 21 century is the matter of shame for nation. But, News of diarrhea, cholera, malnutrition, and famine has been emerging from the mid western hills for many years now. Every year, several hundred people fall victims to such diseases but preventative and curative measures are yet to be found and practiced. Such recurring events, naturally lead to a questioning of rationale of health sector plans, policies and programmers formed at the centre. Looking to its root case is poor sanitation problem in our country

The Nepal country paper of the third South Asia conference on sanitation 16-21, November 2008, pointed out that only 46% population have toilet facility and 76 % population have drinking water supply facility. Same as 53 % urban and 21 % of rural population have sanitation facility. Majority of people of Nepal have a poor understanding of the link between poor hygiene and disease. People tend to want to have latrine for reasons of convenience, privacy and status rather than sanitation and health. Traditional approaches to improving sanitation have focused on technocratic and financial patronage rather than health and hygiene education. Water supply coverage is relatively high, but safe drinking water alone leads to only minor health improvements and does not prevent serious diseases like diarrhea, dysentery and acute respiration infection (ARI).

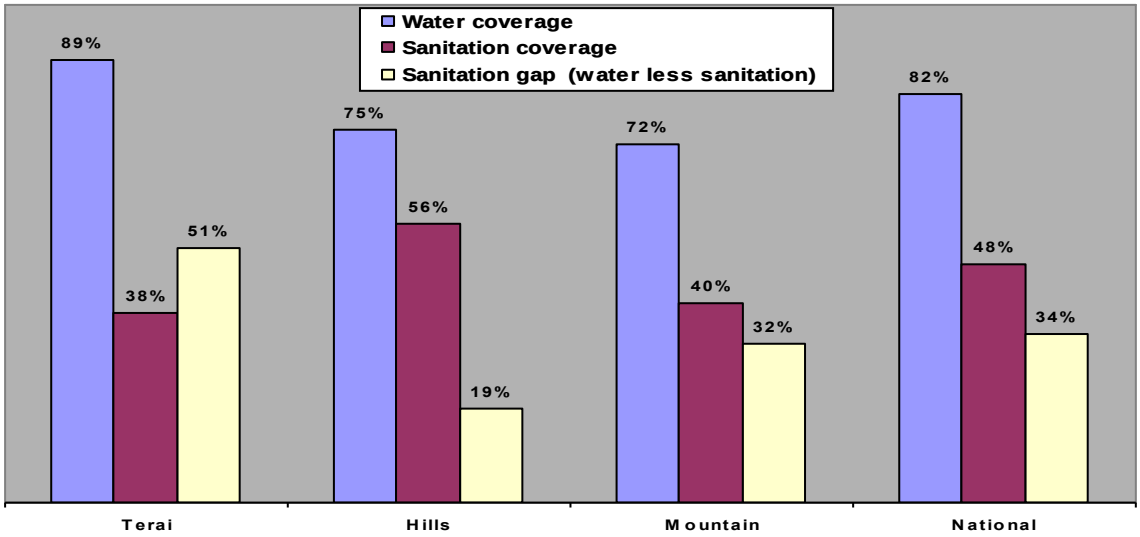
Low coverage of sanitation facilities, poor hygienic practices, coverage gaps between sanitation and water supply in rural as well as urban areas, poor knowledge and practices are the major characteristic of the country regarding water and sanitation. The large numbers of support mechanisms have been applying to address these challenges, but it has hindered sanitation promotion in many cases. Nepal started to work towards strategic improvement of the sanitation status of its people since 1994. But due to lack of political commitment, sanitation issue is going on a dangerous way which is critical issue to address immediate manner. For detail recording following scene can be captured:

`

In Nepal, the important of sanitation was not well realized until 1070s During Panchayat regime, nos. of toilets construction were made compulsory in all households rather than its uses. The tradition and modern latrines until that time were mostly confined to the urban areas latrines were almost non-existence in the rural areas. Even there was no national plan and program till that period to improve the sanitary condition.

In 1981 the GON intervened the sanitation sector by launching UN declaration of international drinking water and sanitation decade. Likewise, a number of measures were announced in 1987 for the improvement of water supply and sanitation condition of the country. Furthermore, in 1991, increased the role of the NGOs and other private sector agencies was perceived. The environmental Sanitation Section (ESS) was established in Department of Water Supply and Sewerage (DWSS) in 1992. Another major development in sanitation sector was the approval of National Sanitation Policy in 1994. In order to plan and support sanitation promotion program through the joint efforts of the stake holders, the Steering Committee for national sanitation action (SCNSA) was set up in 1994. An era of observing National Sanitation Week (NSW) began in 2000, which is continuing uninterruptedly each year.

Comparison scenario of water supply vs. sanitation in Nepal , (2058 National Census)



`

For the last 30 years, the government has been including health education in the curriculum and text of school too. However, there have been no significant improvement with regards to health in schools due to greater focus in academic performances and less on health.

A number of provisions were made in the Eighth Plan (1992-1997), Ninth Plan (1997-2002) and Tenth Plan (2002- 2007) to increase the sanitation coverage. The overall attempt made by the above initiation was 2% of Nepalese have toilet access up to 1980, 6% up to 1090, 15% up to 1997, 25% up to 2001 and 39% up to 2004 (SACOSAN 1).

In order to meet the Millennium Development Goals, estimated at 14000 latrines to be constructed and used per month to fulfill the nations' interest.

The National Census 2058 B.S.

1.2 Statement of Problem

The high incidence of communicable diseases in Nepal is due to poor personal hygiene practice, unsanitary environment as well as well as unsafe drinking water. In

`

fact, there are ten million virus, one million bacteria, 12 thousand parasites and one hundred eggs of as cries in one gram of stools or feces (UNICEF 2000)

Improved hygienic practice is essential if we want to prevent transmission route of fecal-oral diseases like dysentery, cholera, diarrhea, typhoid, jaundice, polio, giardia, intestinal worms (ascribe tape worm, ring worms and pin worms) and gastroenteritis and a number of enteric diseases are regular phenomena for epidemics killing of thousands.

Practice of open defecation, unhygienic behavior and haphazard garbage disposal habits are common in our society. It results in environmental degradation which directly affects the health and quality- life of million of people specially the poorest, most vulnerable people in these region. Even in city area, people defecate in plastic bags and dispose of them in the main streets or in open spaces.

To get rid of from the above problem No Open Defecation campaign (NOD) is one main solution to be intervened as sooner as possible. Evaluating back the thirty years of time interval i.e. first initiation of sanitation attempt from 1981 to 2009, only 22 VDCs of Nepal are declared as Open Defecation Free (ODF) zone which is 1% effort progressed in the visible line. If we do not concentrate seriously and committed heartily, it could take next 3,000 years to get red of from the worst situation of defecating in open air what is existing now. Thus, this research is focused in learning as well as reflection of community initiative to all other VDCs through its effectiveness measure from model clusters of CLTS.

This program was providing its focus on poor, vulnerable and socially excluded groups in promoting on access to and control over the resources through the extensive support of community infrastructure and livelihood improvement program.

1.3 Objectives of the Study

The overall objective of research study was to evaluate the effectiveness and sustainability of CLTS approach and to provide strategic inputs for its promotion.

Specific objectives of the research were as follows:

`

1. To analyze the previous hygienic knowledge of the study population.
2. To analyze the community participation and involvement for CLTS program and practices.
3. To identify the positive as well as negative impacts after CLTS program

1.4 Significance of Study

- At present, the selected topic CLTS was found burning issue relating with human hazard and loss of economy specially in the context of our country Nepal
- Different studies have indicated that most of people are ignoring for management of defecation. In order to realize the maximum health impact of total sanitation approach that even if only one person continues to practice open defecation the health of entire community is jeopardized.
- It linked directly with human development and behavioral change of society bypassing the traditional practice which has found the national Interest too.

1.5 Rational of Selection of the Study Area

- The area has been geographically remote district of Jajarkot.
- In simple sense, CLTS seemed normal but in fact, it is the matter of national issue and human pride

1.6 Limitation of Research Study

- CLTS was island of success as only too small clusters were selected excepting the future scope of districts.
- Generalization of small scaled research can not exactly represent the overall scenario of situation.
- Different terminologies were formally introduced (CLTS, SLTS, WLTS, and so on) to indicate the same function whish is sometime misunderstood too.
- Zero subsidy campaign (no cost at all or too cheaper cost only with local material based) against subsidy intervention.

`

1.7 Organization of the Study

This thesis is divided into six chapters. The First Chapter concerns with Background of the Study, Statement of the Problem, Objectives of the Study, Significance of the Study, Limitation of the Study and Organization of the Study. The Second Chapter is of different Literature of the Studies on Community Led sanitation Program and Practices. In Chapter Three Methodology has been included. It includes Rational of Selection of Study Area, Research Design, Method of Data Collection, Source of Data, Sampling Procedure, and Data Analysis. In Chapter Four Introduction of the Study Area presents general introduction of Jajarkot District, Introduction of Jugathapachaur VDC. In Chapter Fifth Data Analysis and Presentation has been described. Finally, the Chapter Six included summary, conclusion and recommendation.

`

CHAPTER – TWO
LITERATURES REVIEW

2.1 Literatures Review

2.1.1 Concept of CLTS

Theoretically, the CLTS concepts originates from Kamal Kar's evaluation of WaterAid Bangladesh and their local partner organization-VERC's (Village Education Resource Centre is a local NGO) traditional water and sanitation program and his subsequent work in Bangladesh in late 1999 and into 2000. This led to the discovery of the CLTS approach in which use of PRA methods enables local communities to analyze their sanitation conditions and collectively internalize the terrible impact of open defecation on public health and on the entire neighborhood environment. When triggered systematically and combined with 'no-hardware subsidy' policy and a hands-off approach by the facilitator, CLTS could provoke urgent collective local action to become totally ODF. A new style of facilitation has evolved. In its classic form, this uses the crude local word for "shit" and encourages local communities to visit the dirtiest and filthiest areas in the neighborhood. Appraising and analyzing their practices shocks, disgusts and shames people. This style is provocative and fun, and is hands-off in leaving decisions and action to the community.

CLTS Campaign 2007, Ethiopia

CLTS was first introduced to Plan **Ethiopia** and seven other Plan countries of Central, Eastern and Southern Africa in February-March 2007. During the training workshop, participants triggered CLTS in twelve villages around Awassa in the Southern Nations, Nationalities and Peoples' (SNNP) Region in Southwest Ethiopia. Within three months of the training workshop more than fifty villages declared themselves ODF under the follow-up of Plan Ethiopia.

`

2.1. 2 Definition of Terms

Sanitation

Sanitation is the hygienic sense of promoting health through prevention of human contact with the hazards of wastes. Hazards can be physical, microbiological, biological or chemical agents of disease. Wastes that can cause health problems are human and animal feces, solid wastes, domestic wastewater (sewage, sullage, and grey-water), industrial wastes, and agricultural wastes. Hygienic means of prevention can be by using engineering solutions (e.g. sewerage and wastewater treatment), simple technologies (e.g. latrines, septic tanks), or even by personal hygiene practices (e.g. simple hand-washing with soap).

The term "sanitation" can be applied to a specific aspect, concept, location, or strategy, such as:

- Basic sanitation - refers to the management of human feces at the household level. This terminology is the indicator used to describe the target of the Millennium Development Goal on sanitation.
- On-site sanitation - the collection and treatment of waste is done where it is deposited. Examples are the use of pit latrines, septic tanks, and collection tanks.
- Food sanitation - refers to the hygienic measures for ensuring food safety.
- Environmental sanitation - the control of environmental factors that form links in disease transmission. Subsets of this category are solid waste management, water and wastewater treatment, industrial waste treatment and noise and pollution control.
- Ecological sanitation - a concept and an approach of recycling to nature the nutrients from human and animal wastes.

Community Led Total Sanitation (CLTS)

Poor access to adequate sanitation, resulting in the practice of widespread open defecation, has negative health and social impacts on communities, particularly in terms of diseases such as diarrhea and cholera. Community-led total sanitation (CLTS) involves facilitating a process to inspire and empower rural communities to

`

stop open defecation and to build and use latrines, without offering external subsidies to purchase hardware such as pans and pipes. Through the use of participatory rural appraisal PRA methods community members analyze their own sanitation profile including the extent of open defecation and the spread of faucal-oral contamination that detrimentally affects every one of them.

They pointed the on CLTS approach which ignites a sense of disgust and shame among the community. They collectively realize the terrible impact of open defecation: that they quite literally will be ingesting one another's 'shit' so long open defecation continues. This realization mobilizes them into initiating collective action to improve the sanitation situation in the community. If facilitated properly, CLTS can trigger community-led local action to stop open defecation totally, and without subsidies or prescriptions for latrine models from an external sanitation program. Once ignited, the CLTS triggers almost immediate action and communities start digging holes for construction of homemade pit latrines. Families start making toilets within their means, or share toilets in order to become a 100 percent open defecation-free village. Once achieved, the proud community puts up a board at the entrance to the village stating that no one in their village defecates in the open and they will not allow others to do so.

The CLTS approach was first pioneered in 1999 by Dr. Kamal Kar working with the Village Education Resource Centre (VERC) and supported by Water Aid, in a small community of Rajshahi district in Bangladesh. Since then the approach has spread within Bangladesh and has been introduced in a number of other countries in Asia and in Africa. Early experience is signaling the possibility that CLTS could become a self-spreading movement, as input costs are low (no subsidy is needed). The key to successful spread of CLTS will be sustaining good quality facilitation. This basic 'how-to' guide aims to help frontline staff and field facilitators to understand the philosophy and principles of CLTS, and to use some of the practical tools and techniques flexibly and freely.

`

2.2 International Research Review

2.2.1 History of Sanitation

As per encyclopedia the historical proof shown at an earliest evidence of urban sanitation was seen in Harappa, Mohenjo-daro and the recently discovered Rakhigarhi of Indus Valley civilization. This urban plan included the world's first urban sanitation systems. Within the city, individual homes or groups of homes obtained water from wells. From a room that appears to have been set aside for bathing, waste water was directed to covered drains, which lined the major streets. Houses opened only to inner courtyards and smaller lanes.

Roman cities and Roman villas had elements of sanitation systems, delivering water in the streets of towns such as Pompeii, and building stone and wooden drains to collect and remove wastewater from populated areas - see for instance the Cloaca Maxima into the River Tiber in Rome. But there is little record of other sanitation in most of Europe until the High Middle Ages. Unsanitary conditions and overcrowding were widespread throughout Europe and Asia during the Middle Ages, resulting periodically in cataclysmic pandemics such as the Plague of Justinian (541-42) and the Black Death (1347-1351), which killed tens of millions of people and radically altered societies.

Very high infant and child mortality prevailed in Europe throughout medieval times, due not only to deficiencies in sanitation but to insufficient food for a population which had expanded faster than agriculture. This was further complicated by frequent warfare and exploitation of civilians by brutal rulers. Life for the average person at this time was indeed 'nasty, brutish and short

`

Suggested criteria for good sanitation [Source- Pickford, 1995]

Previously suggested criteria for good sanitation are listed in table for comparison.		
Wagner + Lanoix (1958)	**Marais (1961)**	**Government of China**
No contamination of surface soil, springs and wells, surface water	Should be cheap	Free from flies
No access to flies / animals	Should not be communal	Free from odor
Minimum handling of fresh excreta	Uses little / no water	Free from maggots
Free of smells and unsightly conditions	Operates despite misuse	
Simple + inexpensive in construction + operation	Requires little supervision	
	Does not use soak away	
	Disposes of all wastewater	
	Treats wastewater with little danger to users	
	Uses no mechanical equipment	

2.2.2 Community-Led Total Sanitation Practice, Kamal Kar with Robert Chambers (2008)

Dr. Kamal Kar an Indian citizen introduced the Community-Led Total Sanitation (CLTS) focusing on igniting a change in sanitation behavior rather than number of toilets construction. It does this through a process of social awakening that is stimulated by facilitators from within or outside the community. It concentrates on the whole community rather than on individual behaviors. He has focused on collective benefit from stopping open defecation (OD) can encourage a more cooperative approach. People decide together how they will create a clean and hygienic environment that benefits everyone. It is fundamental that CLTS involves no individual household hardware subsidy and does not prescribe latrine models.

Social solidarity, help and cooperation among the households in the community are a common and vital element in CLTS. Other important characteristics are the

`

spontaneous emergence of Natural Leaders as a community proceeds towards ODF status; local innovations of low cost toilet models using locally available materials, and community-innovated systems of reward, penalty, spread and scaling-up. CLTS encourages the community to take responsibility and to take its own action. In its fullest sense, total sanitation includes a range of behaviors such as: stopping all open defecation; ensuring that everyone uses a hygienic toilet; washing hands with soap before preparing food and eating, after using the toilet, and after contact with babies' feces, or birds and animals; handling food and water in a hygienic manner; and safe disposal of animal and domestic waste to create a clean and safe environment. CLTS concentrates on ending open defecation (OD) as a first significant step and entry point to changing behavior. It starts by enabling people to do their own sanitation profile through appraisal, observation and analysis of their practices of OD and its effects. This kind of feeling of shame and disgust; often generates a desire to stop OD and clean up their neighborhood.

Further, he has highlighted the key attributes and behavior like Do and Don't as following:

Do	**Don't**
1. Facilitation their own appraisal and analysis of local sanitation profile	1. Educate, lecture, or tell people what to do
2. Let people realize for themselves through their own analysis	2. Tell people what is good and bad
3. Facilitate to trigger self-mobilization	3. Push for, or demand action
4. Stand back, leave it to local leaders	4. Be in charge
5. Be cool and allow conservation between insiders – approaching the triggering moment	5. Interrupt when charged up community members starts shaming their own people for open defecation practices or other hygiene behavior
6. Take a neutral stand and allow heated discussion for and against OD between them. Remember these are right indication and symptoms of approaching triggering moment.	6. Discourage members of the community from arguing amongst themselves or shaming each other or quickly concludes that the shaming element between community members should be

`

	avoided as culturally insensitive
7. Appreciate those who take a lead and engage themselves	7. Overlook natural emerging natural leaders
8. Always encourage women and the poorer section the community to participate	8. Overlook women, children and others who often get left out
9. Appreciate community members' offers to help poorer members	9. Overlook people who came forward to help
10. Let people innovate smple latrines	10. Promote particular latrine designs
11. Trigger local action and encourage self-help	11. Offer hardware subsidy
12. Be bold at caution	12. Be too humble or too polite. Don't try to convince too politely
13. Listen attentively to everything	13. Interrupt

Likewise, Kamal kar has emphasis in triggering approach. He has defined the in there phases triggering stages i.e. pre-triggering phase, triggering phase and post triggering phase.

2.2.3 The Water Aid Bangladesh / VERC Sophie C Allan; 100% Total Sanitation Approach: Cost, Motivation and Sustainability - Sophie C Allan

Sophie C Allan studied the Water Aid Bangladesh (WAB) / Village Education Resource Centre (VERC) pioneered 100% Total Sanitation Approach has achieved complete latrine coverage and, more importantly, an end to open defecation in more than 100 villages in six districts of Bangladesh [Kar, 2003]. The implications of a new and seemingly successful approach to increasing latrine use by all sectors of the community are significant and deserve robust documentation in order that the process may be adapted and replicated elsewhere. The aim of this study was to examine three aspects of the WAB / VERC 100% Total Sanitation Approach. Firstly, the process at field level and estimated project cost per family were documented. Secondly, the motivational factors for latrine adoption in successful project areas were explored in order to facilitate learning and transfer. Thirdly, the sustainability aspects of the

`

process, including current monitoring for sustainability and the extent to which behavior change was maintained, investigated and the implications of scaling up the process discussed. In the paras (56 Hhs equal one para) studied, the success of the approach in achieving an end to open defecation seemed to hinge on the availability of a wide choice of “safe” latrine options that suit the financial abilities of different community groups. Overall, prestige (including positive social pressure) was the strongest motivational factor for latrine adoption.

However, motivational factors evolved over time and differences were seen between villages with different geographic and religious characteristics. It is therefore important that field staffs were alert to differing aspirations encountered and that the approach remains flexible enough to adapt to changing priorities

2.2.4 Subsidy or self respect, participatory total community sanitation in Bangladesh

Dr. Kamal Kar has pinned the access to latrines in rural area of Bangladesh which was less than 15% for which many INGOs and Go initiated to improve the condition of sanitation. GON has also discouraged the subsisted policy in all affordable community. In sanitation management, subsidy was not important, where as important was community respect. Thus the study has showed that word subsidy should not be spelled out at all intervention. Participatory approaches were crucial to change within communities and organization must watch out for triggering moment. A triggering moment in this case, was the initial embarrassing moment when the facilitation was taken to the direct parts of the village. The whole success depends on triggering the inner feeling of self-respect of the community to get them to take the initiatives’

2.2.5 Launch of International Year of Sanitation in Australia, World Health Organization 2008

In website of this context sanitation has described as Human waste, (excreta) is smelly, attracts flies, and is personal. Unless it is managed effectively disease can spread quickly, killing thousands. It is further defined that sanitation is the process of preventing human, animal, and insect contact with excreta to avoid the spread of

`

diseases. Likewise, stated that one gram of faeces can contain 10 million viruses, 1 million bacteria, 1 thousand cyst parasites and about a hundred worm eggs so the danger of disease is massive. When any waste is exposed and clean water and hygiene education are limited, all people in the community are vulnerable to illness caused by feces.

World Toilet Day, 19 November 2008, aimed to improve toilets for all through:-

- requesting better equality (more facilities for women);
- more accessibility and special provisions (for the disabled and mothers with babies too)
- improved cleanliness (for everyone);
- Providing more toilets (for the less fortunate).

- 1.1 billion People, or roughly one sixth of the world's population, do not have access to safe water and 2.6 billion people, or two fifths of the world's population, do not have access to adequate sanitation.
- Between 1990 and 2004 more than 1.2 billion people worldwide gained access to improved sanitation.
- Lack of sanitation increases the risk of outbreaks of cholera, typhoid and dysentery.
- In 2006, 1.8 million children under age 5 (an average of 4900 every day) died from the consequences of unsafe water and inadequate hygiene.
- For every $1 spent on water and sanitation an average of $8 is saved in health costs and productivity gained.
- Water, hygiene and sanitation interventions reduce diarrhea incidence by 26% and mortality by 65%

In addition the sanitation impact to people stipulated the version as mentioned below:

- Without a clean, safe toilet close to home people are forced to live in an unhealthy and unpleasant environment.

`

- Each year 1.8 million children die and many more are sick with diseases such as cholera, typhoid and dysentery because of unclean water and poor sanitation.
- Having to go to the toilet in the open or sharing facilities with hundreds of others, particularly if you are suffering with diarrhea, is extremely embarrassing and unsafe for everyone's health.
- Women and girls are especially disadvantaged because they often have to wait until it is dark, which can lead to illness or the danger of attack.
- Sickness takes children away from school and adults away from earning an income. Medical expenses make massive demands on the limited incomes of the poor.
- Sanitation enhances dignity, privacy and safety, especially for women and girls. Clean, safe toilets and hand-washing facilities at home and school help children's ability to learn
- Improved health helps women and men earn a living
- Effective sanitation means the environment is safer and cleaner for all activities in which children can play, food can be prepared safely, homes can be kept cleaner.

Challenges of CLTS

Conditions may be more challenging where there is/are some of the following, especially when they combine. The question to ask is whether combinations of these make a community or area less suitable for early triggering, which should then come later.

2 Large settlement
3 Close to towns and main roads
4 Socially and culturally diverse
5 With much surrounding cover
6 Desert conditions in which excreta dry and disintegrate
7 Well protected sources for pure water
8 A current, previous or nearby or national programmed of hardware subsidy to households

`

9 Apparently clean conditions (count of urine)

10 Low incidence of diarrheal diseases and infant mortality

2.2.6 Rural water sharing, sanitation and hygiene the social aspect. WELL Task no. 483 + 534. WEDC, Loughborough and LSHTM, London.- Hanchett S.

Hanchett S has researched more than three-quarters of Bangladeshis - over 115 million people - live in rural areas. In many of these areas, running water and sanitary latrines are luxury items. Among the poorest families, almost one in three people defecates in the open. Open defecation exposes children to feces in their everyday environment. Of all the latrines in rural areas, only 32 per cent meet the international standards for a sanitary latrine in that they completely isolate excreta from the human environment through the use of a water seal U-bend or some other lid or barrier. Without pipes and drainage, people must travel to water sources to collect their drinking and cooking water. 96 per cent of the time, He has showed the women and children in the family who carry the heavy pots of water back to the house. Every year, localized flooding ruins many water sources and latrines, and hampers efforts to build new ones. Severe floods and cyclones were becoming more common, wiping away entire villages along with their water and sanitation infrastructure. Poor sanitation practices have dire health impacts. Diarrhea, typhoid and other diseases are spread by bacteria in feces. Diarrhea and respiratory disease - the combined leading causes of childhood mortality globally and in Bangladesh - were common amongst rural children.1 UNICEF efforts to improve the water, sanitation and hygiene situation of rural Bangladesh, not only contribute to millennium development goal 7 (target C) to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation; they also contribute to goal to reduce child mortality by two-thirds. The key statistics were as following in table:-1

`

Table -1

Details	%
Use of sanitary latrines (% of rural population)	32
Defecating in the open (% of rural population)	9
Use of hanging latrines (% of rural population)	20
Children with diarrhoea during last two weeks (% rural)	7
Safe disposal of faeces of children (under 5) (% rural)	15

Villages are used in planning for infrastructural improvements. The sanitation maps are also used to monitor whether latrines are kept clean and whether people use new facilities. Other than just a handy planning and monitoring tool, the maps serve as constant reminders of the villages' sanitation situations, encouraging positive peer pressure among community members to ensure that courtyards and latrines are kept clean and open defecation ceases.

Like wise, under the banner of the International Year of Sanitation 2008, UNICEF launched a national hand washing campaign. Broadcast on television and radio across the country, a campaign jingle and several short films explain the benefits of proper hand washing. UNICEF is interacting with the government on various other public events throughout 2008 to raise the public profile of sanitation.

UNICEF and its partners have a strong school focus to both promote better hygiene behaviors and increase the community's sanitation practices. Schools were assisted in installing latrines, for both boys and girls, and safe water sources. Menstrual sanitation facilities have been piloted in 24 secondary schools**,** and facilities included in latrine plans across the country.

In primary schools, children from grades 1 to 5 have weekly lessons on safe water, sanitation and hygiene. They are also encouraged to pass on what they have learnt to other children and to their families and communities to spread the information and good practices. These lessons are taken a step further in "student brigades". Student brigades are responsible for cleaning the school surrounds and latrines, cleaning their classrooms, spreading hygiene messages among their neighbors, conducting surveys,

`

and participating in rallies and fairs. They even visit the homes of students who have missed a few days school to see why their peers have not been attending. Students.

2.2.7 Safe Drinking is Essential- Sanitation in Cambodia, National Academy of Science 2005

As per the book heading above decades of conflict destroyed much of Cambodia's water supply infrastructure, which declined in efficiency from the 1960s. By 1993, only 25 percent residents had access to piped water. Investments since the mid 1990s have helped provide cleaner water supplies for many in Cambodia about 35-40 percent of the country now gets its water from improved drinking water sources like new rural wells and a rebuilt urban piping infrastructure. Unfortunately, improvements in proper sanitation systems have not kept pace. Indeed, a lack of sanitation continued to that period as a major public health menace. About ten percent of Cambodian children have died before they are a year old. Many of these deaths were due to preventable, waterborne diseases or mosquito-driven ailments spawned by the nation's poor sanitation facilities.

It is estimated by UNICEF that rural sanitation coverage in Cambodia was only eight percent, making it the lowest in the region and the second lowest outside of Africa. In the absence of sanitation facilities, most rural dwellers used rice paddies, banana groves, and other water sources to dispose of their own waste—thus polluted the water on which they depend. The nation's Ministry of Rural Development, backed by many international partners, had attacked this problem with a rural water supply and sanitation initiative. In addition to digging new wells, hundreds of family and school-based latrines had been built within the last few years to provide safe access to sanitation for rural Cambodians.

Further elaboration done to improving access to water and sanitation facilities, aid organizations also had stepped up efforts to teach young Cambodians about the need for proper hygiene practices to protect them from disease. Studies showed that the simple practice of washing hands with soap can reduce diarrheal diseases by over 40 percent.

`

As awareness about the connection between clean water, sanitation, and hygiene grows in rural Cambodia, further efforts to protect against water-related diseases spreading by insects are also on the rise. Mosquito screens are being installed on latrine pipes to ensure that the breeding insects within cannot escape to infect humans. Household mosquito nets had also been marketed to protect individuals and reduce the spread of disease.

Lastly, enclosed water tanks are being employed to reduce mosquito breeding in stored water, and filtration systems are increasingly used to remove any parasites from that same water before it is consumed.

2.2.8 Water, Sanitation and Hygiene Standards for Schools in Low-cost Settings -World Health Organization 2009

WHO identified diseases related to inadequate water, sanitation and hygiene are a huge burden in developing countries given record estimated that 88% of diarrheal disease is caused by unsafe water supply, and inadequate sanitation and hygiene (WHO, 2004). Many schools serve communities that have a high prevalence of diseases related to inadequate water supply, sanitation and hygiene, and where child malnutrition and other underlying health problems are common. Schools, particularly those situated in rural areas, often completely lack drinking-water and sanitation and hand washing facilities; where such facilities does exist they are often inadequate in both quality and quantity. Schools with poor water, sanitation and hygiene conditions, and intense levels of interpersonal contact, are high-risk environments for children and staff, and exacerbate children's particular susceptibility to environmental health hazards.

These included helminthes infections (which affect hundreds of millions of school-age children), long-term exposure to chemical contaminants in water (e.g. lead and arsenic existence), diarrheal diseases and malaria infections. Likewise further added that girls and boys are likely to be affected in different ways by inadequate water, sanitation and hygiene conditions in schools, and this may contribute to unequal learning opportunities in overall observation of their learning cycles. Also shown, girls and female teachers are more affected than boys because the lack of sanitary facilities means that they cannot attend school during menstruation cycle. Providing

`

adequate levels of water supply, sanitation and hygiene in schools is of direct relevance to the United Nations (UN) Millennium Development Goals of achieving universal primary education, promoting gender equality and reducing child mortality. It is also supportive of other goals, especially those on major diseases and infant mortality rate of population. At the same time, highlighted that, the UN Millennium Project and the UN Secretary-General have highlighted the importance of rapidly addressing "quick wins"; that is; specifically provision of services to schools and health-care facilities. Guidelines on water, sanitation and hygiene in schools are widely available, but additional guidance and standards for low-cost settings are needed in this study.

2.2.9 Water supply Sanitation and Collaborative Council, (2000) Investing in Sustainable Sanitation and Hygiene

The water supply and sanitation collective council was established by the united nation in 1990s to serve those people in the world who do not have access to drinking water and sanitation. It works by enchasing collaboration the sector. The main task taken as achieving the Millennium Development Goal especially sanitation target unto 1015.

2.2.10 Practical Guide to Triggering Community-Led Total Sanitation

Dr Kamal kar facilitated the CLTS by triggering the community-led local action to stop open defecation totally, and without subsidies or prescriptions for latrine models from an external sanitation program. He has expressed, once ignited, the CLTS triggers almost immediate action and communities start digging holes for construction of homemade pit latrines. Families start making toilets within their means, or share toilets in order to become a 100 per cent open defecation-free village. Once achieved, the proud community puts up a board at the entrance to the village stating that no one in their village defecates in the open and they will not allow others to do so.

This approach of CLTS approach was first pioneered in 1999 by Kamal Kar working with the Village Education Resource Centre (VERC) and supported by Water Aid, in a small community of Rajshahi district in Bangladesh. Since then the approach has spread within Bangladesh and has been introduced in a number of other countries in

`

Asia and in Africa. Early experience is signaling the possibility that CLTS could become a self-spreading movement, as input costs are low (no subsidy is needed).

The key to successful spread of CLTS was sustaining good quality facilitation. This basic 'how-to' guide aims to help frontline staff and field facilitators to understand the philosophy and principles of CLTS, and to use some of the practical tools and techniques flexibly and freely.

Kamal Kar has developed the clear table of mirror to be CLTS in absolute sense as following

Activities	The Pre- sanitation	Target-driven Partial NOW and the FUTURE Community-led Total Sanitation
Start with	Focused Things	Focused People
Core Activity	Constructing Latrines	Igniting and facilitating processes
Latrines designed by	Engineers	Community innovators
Number of designs	One or a few	Many with different options
Main materials	Cement, pipes, bricks, etc. purchased from outside	Bamboo, wood, tin, jute, plastic, etc. almost all locally available
Cash cost	High	Can be under US$1
Indicators	Latrines constructed	Open defecation ended
Sustainability	Partial and patchy	High
Who benefits	The better off	All including the poorest
Key motivation	Subsidy	Disgust and self-respect
Coverage / usage	Partial Total	Total
Benefits: open	Lower : open defecation continuing	Higher: open defecation ends

`

2.3 National Research Review

2.3.1 Nepal Country Plan for the International Year of Sanitation, 2008

In this book, summarized that, Nepal had shown it solidarity with the global initiatives of the International Year of Sanitation (IYS) 2008 with the formulation and implementation of the Nepal Year Country plan for IYS 2008. The activities of IYS 2008 created enabling environment for hygiene and sanitation promotion, mobilizing resources from local to central Level enhancing coordination, cooperation and increasing advocacy and awareness generation. There cited, along with the IYS 2008 a total of 37 village development committees and some 100 schools catchment areas and communities have been declared open defecation free zones through the local level efforts.

Thus, Nepal Government's steering committee has set out core objectives for international sanitation year to fulfill the millennium development goal up to 2015. Importance of sanitation and water-supply facility briefly described. The given statements showed that, in Nepal sanitation and water supply facilities is over 30%. About one third of the 75 districts have sanitation coverage less than 20% . The coverage among the rich people is 80% whereas it is just 21% among the poor. Likewise; the coverage in rural area is 21% and 53% in urban areas (SACOSAN: 2006) among the public and community schools, only 41% of them have latrines facilities. However, only two-third of schools has sufficient facilities and one-fourth have separate facilities for girls. Solid waste and wastewater problems are growing rapidly as there is a massive population influx into urban areas in recent years. The rate of waste per capita waste is also growing coupled with poor drainage affecting sage water. The practices of rampant open –air defecation has badly contaminated the water bodies and put public health at stake. Further explained that, annually some 130000 children under year die of diarrheal disease due to poor hygiene and sanitation.(UNICEF 2005) .Nepal continue to bear the loss of some 10 billion rupees each year in terms of health expenses, loss of productivity, and adverse effect in tourism due to poor hygiene and environmental sanitation (SCNSA:1999/200). Thus, the following barriers and challenges for the slow progress of sanitation are highlighted below:

`

- Hygiene and sanitation is the least prioritized within the national budget and investment in the water and sanitation sector is inadequate to keep pace with the overall rise of global aid.
- Lack of uniformity in approaches of hygiene and sanitation financing.
- Out track of poor, disadvantaged and high risk group form the mainstream have been the constraints to maintain equity, ownership and participation.
- Ineffective translation of policy into action to inadequate coordination among the sector actors.

Thus, vision, strategies, key result areas, key activities and policies of financing are set out for effective planning of sanitation and its implementation.

2.3.2 The Water Supply and Sanitation Situation of the Urban Poor in the Kathmandu Valley

In this research book, Nepal Water for Health (NEWAH) has given more emphasis on community sanitation and its utilization. More attention to be given in slum and squatter settlement and required different strategies .to make friendly toilet users. The followings are tactical ways of making sanitation effective:

1. Promotion of cost-effective household latrine. In this point, communities to be emphasized on local material and easy techniques with providing access to micro-credit.
2. Improved solid waste management.
3. To have effective drainage to squatter settlement otherwise drainage problem exists as usual.
4. Role to consumers to be strengthened so that they can take active role for efficient management of sanitation work.

Including above all, the study has touched on a number of issues needing further research if the design of water and sanitation service is to meet the needs of poor. They are; enumeration and mapping of the poor, the water and sanitation needs of low income renters, the potential role of the wards and NGOs in facilitating water and sanitation improvement, technological options, the nature of demand for water

`

and its susceptibility to price changes and willingness to pay for water and sanitation services.

Finally, the expression concluded as a wide range of technical options available for water supply, water quality enhancement and sanitation. Also, needed bilingual (Nepali and English), handbook that describes these options and agencies to sources for information.

2.3.3 Community Let Total Sanitation-Resource Center Network Nepal-(RSNN)

This book has stated about the sanitation situation of Nepal, till now, only 42% of total population, people have practice to use toilets (Nepal population Health Survey 2006). Present context found, sanitation as a burning issue in rural community as well as urban community of Nepal. Due to inadequate sanitation, about 13 thousand children under 5 years are dying because of diarrhea each year.

Total Sanitation is not only limited to the construction of infrastructure of drinking water and toilet. Its areas are use of clean and healthy toilets, develop habits to wash hands, practice to cover food and drinking water, use clean water for all domestic works, disrupt the linkage between mouth and fecal through management of personal, domestic and environmental sanitation. Lack of hygienic environment in house and school level, women and children accelerated in the vulnerable direction. Nepalese people have loosened productive time and expenditure in the absence of good health caused by different sanitation related diseases. Its expenses have been estimated 11 billion rupees annually which is equivalent to 45% of GDP.

As per the resource, the systematic sanitation work was started from 2060 B.S. which was lesson leaned from CLTS Bangladesh. The statement recorded that the first initiation was done at Karkineta of Dhading, Dumre Akata Chowak of Morang and Bhorlema of Lamjung District. At the beginning, Dumre Akata Chowak of Morang District found the CLTS declared spot in Nepal. In this book, different process and method of implementation (PRA, Ignition methods, phases, declaration process, Social norms, fecal appraisal for CLTS) shown effectively.

`

First NOD Declared Spot of Nepal

2.3.4 An Exploratory Research Study on the Discomfort faced by Pregnant Women, Elderly, Overweight, Sick and Disabled People when using squat Latrines. -NEWAH

This book showed the coverage of sanitation in Nepal is 47% and number of latrines to construct to meet Millennium Goals, estimated at 14000 per month for the next 12 years which is the focus in the sanitation sector as an accelerating coverage (Census 2001). In the book mentioned, if one member of community practices open defecation fecal matter spreads and entire community is affected resulting in diseases with possible death.

This study sought to explore the problem experienced by pregnant women, elderly, overweight, sick and disabled people when NEWAH supported pit latrines. The study found that most of the pit latrine are found discomfort in use and uneconomical in practices

The study showed, the engineer who designed the latrine structure are not found sensitive to these issues. After consultation with these issues, number of options has been designed to make using latrine more comfortable and economical. The study has raised the number of questions relating to awareness rising within implementing institution for sustainability approach.

`

2.3.5 Meeting Millennium Development Goal in Nepal- UNDP, 2004

Although data from different sources vary but it is a known fact that more than 50% of Nepalese people are using open defecation. Nepal Commitment is to reach the sanitation target in the favor of ***Millennium Development Goals*** (MDG) and achieve the national target of universal sanitation by 2017AD. Nepalese Planners and implementers are driving mission, the nation's legal trends, institutional thrust, financial priority and program implementation approaches towards it.

2.3.6 Nepals' MoHP Health Survey - 2064,

Some 90 % of the urban households and 80% of the rural households have access to drinking water supply facilities. Similarly, in sanitation about 37 percent of urban households and 20 percent of rural households are using improved latrines. From the administrative records, it is found that some 77 % of population has access to drinking water, and 46 % of population is using proper latrines.

Report on epidemic diarrhea control and prevention recently occurred in west, mid west and far west region of Nepal by GoN.& MoHP.

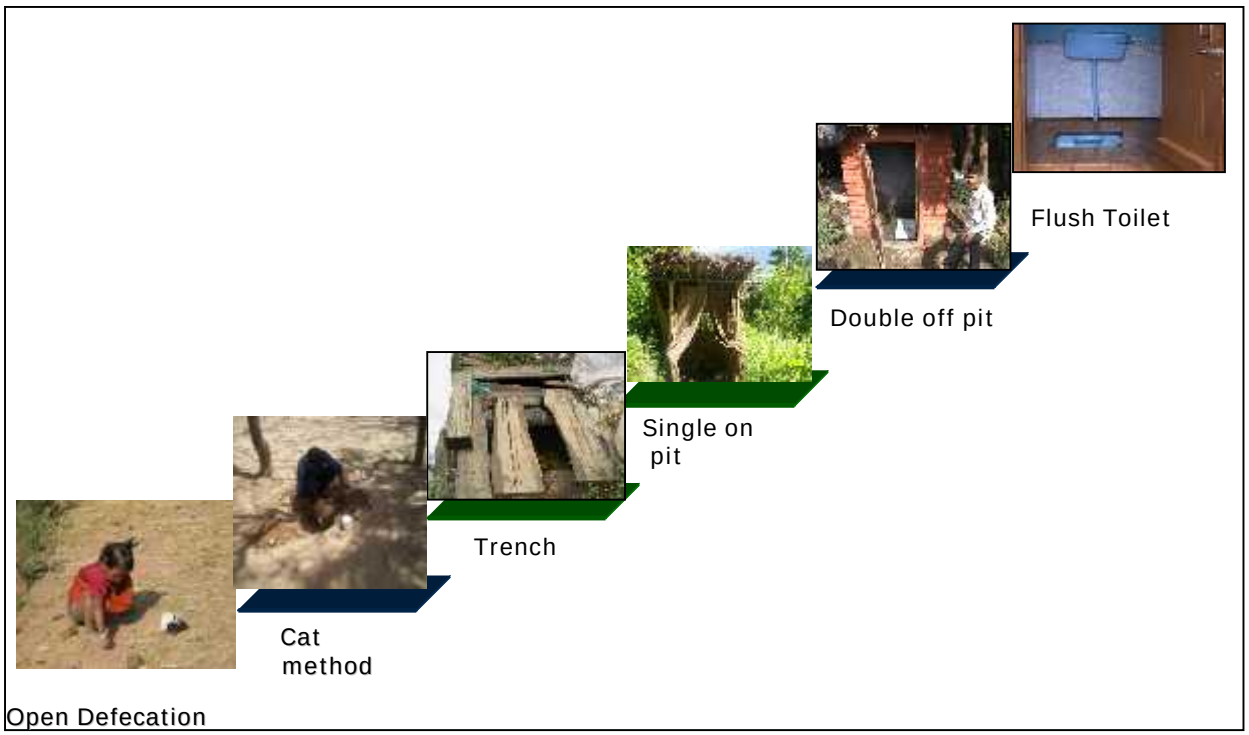
2.3.7 Nepal Census Indicators, National Planning Commission Secretariat, Central Bureau of Statistics (2002)

According to Nepal census indicators 2001 and trends; Disposal facilities for human waste are a first line of defense against diseases that are transmitted by contact with faces. The proportion of households using different kinds of toilets facilities in an indicator of basic access to sanitation and a good indicator of human development, since toilets aren't only contribute to the general hygiene and quality of life but also often corroborate other socioeconomic indicators such as; education and income. These indicators also provide evidences of inequities among the districts, and development regions Nepal. The present census was the first time that Nepal collected census data on the accessibility or use of toilet facilities. This data was collected from doing the sample households. The census question on toilet offered three options: modern flush toilets, ordinary toilets, and no toilets. Modern flush toilets were defined as those which flush either by machine or by hand (i.e. bucket) or

`

any other means, and which are linked to either the sewerage system or a septic tank. Ordinary toilets do not have a flushing system. The category **"No Toilet"** includes the use of forest, stream, rivers are or open places for their defecation. The proportion of households using different kinds of toilets is expressed as a percentage of total number of house holds

2.3.8 Sanitation Ladder to achieve modern society



`

CHAPTER – THREE
RESEARCH METHODOLOGY

This chapter describes the methods used in this study. Only one method is not sufficient to gather all kinds of information. So, useful methods were used in data collection. Specially following research methods were adopted during the study to make it more scientific and reliable. In this chapter, research design, nature and source of data sampling procedure selection tools and technique and constraints in data collection are discussed.

3.1 Research Design

This study is mainly based on the initiation and practice of CLTS in open defecation free zone declared area. Hence the study is descriptive and analytic in nature. This study emphasized qualitative rather than quantitative aspect of phenomenon. This research design has been chosen purposively as the goal of the study.

3.2 The Universe of study

In this study, the information is collected by using semi- structured questionnaire. The construction of the questions was very simple and relevant to the subject matter in Nepali language.

Validity is maintained by the pre testing of questionnaire/Interview schedule. Questionnaire/Interview schedule submitted to the concerned advisor at the Department of Rural Development expecting necessary suggestion from assigned supervisor. According to the advice of research guide, the tools have been improved and corrected accordingly

By using the improved questionnaire/interview schedule pre testing has been done in PPC centers. From the result of pre testing other necessary change have made and finalized.

`

3.3 Nature and Source of Data

3.3.1 Primary Data

These data have collected by active participation of researcher herself in field study, household survey, focused group discussion and questionnaire to the community of research site.

3.3.2 Secondary Data

Different data published by daily as well as weakly News Papers, DDC PPC and DWSO have been taken for these secondary data collection.

3.4 Sampling Procedure

The study area contains one cluster in which one ward having 50 of households in total, were selected using the mixed type of sampling method. Purposive sampling method and weighted sampling method have been used by analyzing the poverty status of community, of the total 50 households, 25 households (50%) have been chosen to make the study more specific. Thus, total numbers of respondents are 25 including both male and female of different age group.

3.5 Tools and Techniques for Data Collection

The following tools and techniques have been used to collect primary as well as secondary data of the specific area.

3.5.1 Questionnaire Survey

Structured questionnaire were prepared to generate the realistic and accurate data from the selected households of the study area. The respondents were requested to fill up the questionnaires. In case of illiterate people, the facilitators were used to fill up the data who could not fill up the questionnaires them self. The questions were asked to the respondents and answers were filled up with required data.

`

3.5.2 Interview Method

For this purpose, structured and semi structured interviews were carryout to the people of the area. Experiences and learning of INGOs, NGOs, government organization's executives and development professionals are incorporated of those who are involving in promoting the programme No Open Defecation through semi-structured questions and reviewing their action research documents.

3.5.3 Focus Group Discussion

Group discussions carried out with , Community participants and political representatives of concerned area and VDCs to collect their practical experiences concerning issues related key areas and components.

3.5.4 Field Observation

During field visit, purposive sample data collected. Sampling of data done in such a way that could represent the whole system of NOD. Formal and informal interactions and focused group discussion done with staff of implementing agency, member of PPCs and WGs for nearest validity. Researcher herself participated for filling questionnaire formats and partner staffs of concerned districts are contacted for other information related to the research. Stakeholders were interviewed and questionnaires are filled at site. At the time of data collection, researcher observed directly the proposed area of CLTS declaration and observed the pre-set total sanitation indicators except that no spitting in public places..This indicator found difficult to measure at once. Few snaps of photos were clicked for our records (see the annex photos). These photos were basically related with the usual phenomena of CLTS operationalization and change of behavior after the process adopted,

Indicators fixed to declare sanitized village :

1. 100% use of hygienic latrines i.e. no open defecation or open / hanging latrine use.
2. Effective hand washing after defecation and before taking or handling food.
3. Food and water covered.
4. Good personal hygiene practices.
5. Latrines well managed.
6. Using sandals when defecating.
7. Clean courtyards and roads/trail ides.
8. Garbage disposal in a fixed place and dung disposed of in a hygienic way.
9. Safe water use for all domestic purposes.
10. Water points well managed.
11. Hygienic waste water disposal.
12. No spitting in public places

`

3.5.5 Key Informants

At the initial stage, researcher actively involved in identifying key informants. Several types of key informants such as executive committee members of women groups, and PPC leaders are selected for interviews in order to clarify the activities of CLTS promotion and to obtain their views and opinions, as well as cross checked the information given by the informants.

Table was prepared from the completed questionnaire for tabulating different socio-economic characteristics, such as income, education status, family size, caste, production, land, ethnicity and sanitation perspective.

`

CHAPTER – FOUR
GENERAL INTRODUCTION OF THE STUDY AREA

4.1 Characteristics of the Sample Households

This chapter basically consists of the description, analysis and the data obtained from field survey, it begins with setting, which would help us in understanding the context.

4.1.1 Description of Jajarkot District

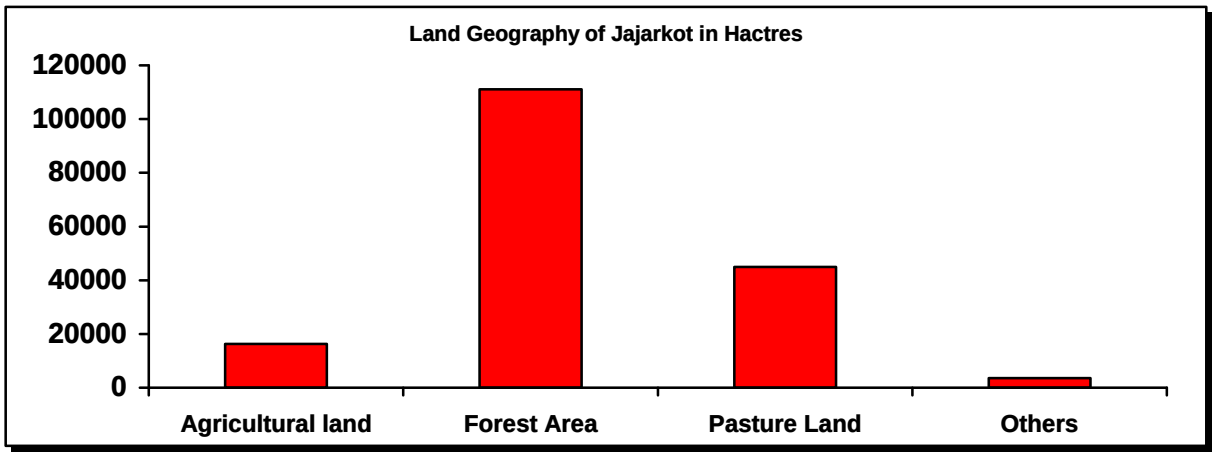
Jajarkot is a mid hilly district of Bheri zone. It lies in mid western Development region. District extended over 28 o 37’2” North to 29 0 7’32” Northern latitude and 81 0 49’ 22’ east to 82 0 34’ 46” longitude. Altitude of district varies from 610 m to 5412 m. The height of District headquarter Khalanga from SL is 1250 m. Area occupied by this district is 2230 sq km.

According to the census report of 2068 B.S., the total number of households present is 30,472. The total population of Jajarkot district is 1, 71,304. Among them, 85,537 are males and 85,767 are females. The population density of this district is 77 people per sq.km. Annual Population Increase Rate is 1.68%. In this whole district, there are only 2 higher secondary schools and only one campus. . Politically district divided in to 2 constitutional areas, 11 Ilaka and 30 VDCs. In 2018 B.S. ,Nepal was divided into 14 zones and 75 districts. This lies between Rukum, Dolpha, Humla, Jajarkot, Dailekh ,Surkhet and Rolpa. Thus making this district surrounded by 7 districts. The Human Development Index of this districts 0.343 ranking 71 positions in the country.

Rice, wheat, barley, millet, corn, is the main supplement grain of crops. The always scarcity food is usual phenomenon in this district. Total need of food at the rate 201 kg per year is 21261.78 metric ton where as district's production is 20866.57 metric tons. Thus the deficit is 1647.20 metric tons (source; INGO network Nepal 2062). The main occupation of this district is agriculture. Besides this, agriculture farming is other business of this district. Buffalo and cows farming, sheep and goad raising also included in animal farming. Some people are involved in herbal collection and trading, few people are involved in services and remaining found unemployment

`

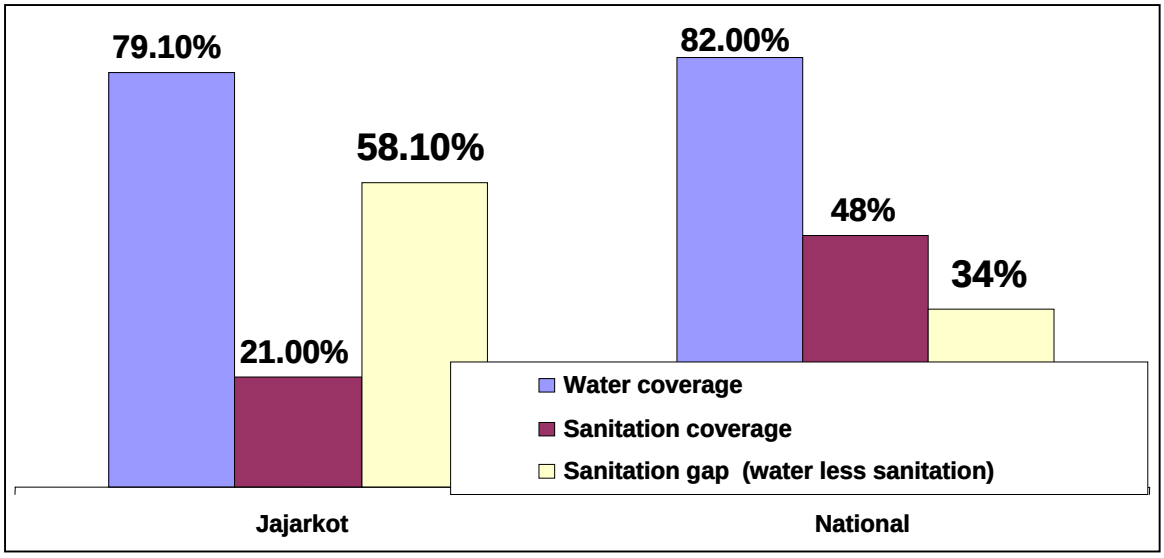
District profile of Jajarkot 2009



4.1.2 Sanitation work in Jughathapachaur VDC, Jajarkot

Many NGOs and INGOs and government agencies have been working in Jughathapachaur VDC for the awareness of importance of cleanliness and sanitation.Their activities include support of education materials and quality education in government schools of remote districts of Bheri. Participatory action research and capacity building of the poor, water supply and sanitation, health and hygiene promotion are other integrated program of these NGOs and INGOs.

`



The 12 criteria for 100% sanitation as defined by the working NGOs and INGOs. However, it is after the cessation of open-defecation alone that the village announces itself 100% sanitized and receives a signboard declaring that no-one defecates in the open area. The 100% sanitation approach puts the duty on making "safe" latrines from locally available low-cost materials rather than adhering to a specific standard latrine design.

"No-one in this village defecates in the open"

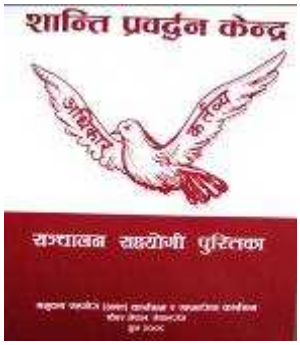
Critical features for a 99% sanitized village

(The specific criteria need to be fulfilled for a latrine to be deemed "safe)

1. 100% use of hygienic latrines i.e. no open defecation or open
2. Effective hand washing after defecation and before taking or handling food.
3. Food and water covered.
4. Good personal hygiene practices.
5. Latrines well managed.
6. Using sandals when defecating.
7. Clean courtyards and roadsides.
8. Garbage disposal in a fixed place and dung disposed of in a hygienic way.
9. Safe water use for all domestic purposes.
10. Water points well managed.
11. Hygienic waste water disposal.
12. No spitting in public places

`

4.1.3 Effectiveness sharing with PPC Centers



Operational guideline of PPC

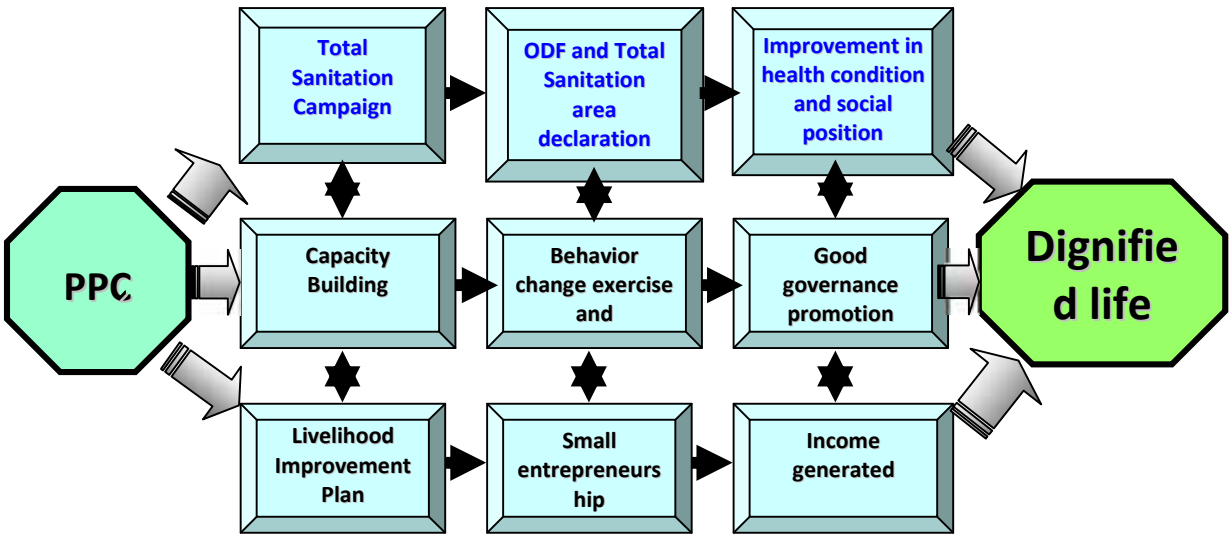
Mobilization of Community

Formation and strengthening of reflect center lies within this framework and named PPC (adopted name with the previous similar projects/program). As such the program of INGOs and NGOs have been undertaken its program interventions to address the social issues and livelihoods of target groups through ensuring the basic rights and empowering them in the socio-economic transformation process. The social transformation approach adopted by the program is given in below figure.

The program has implemented reflect center called Peace promotion Centre (PPC) as informal class for community empowerment and transformation process. This is a functional group (generally 25 members in each PPC) where women or mixed group meet once a week for about four hours and discuss over pertinent issues of the community. PPC's approach reflects participatory empowerment methodology where women get opportunity to meet each other in a group, find out issues and prepare action plan to conduct advocacy campaign on some of the prioritized issues such as CLTS (as burning issue), women's representation, inclusive social structure, budget allocation for women, good governance, access to employment opportunity etc. In this respect, the PPC kept the Community Led Total Sanitation campaign as a center of pillar of this group and promoted the greater community awareness for ignition of the community level campaign. In the leadership of PPC and it's networks, which are being developed at VDC and district level have coordinated with Government line agencies, NGOs, CBOs and other stakeholders for effectiveness of the total sanitation campaign and community awareness.

`

Social transformation framework



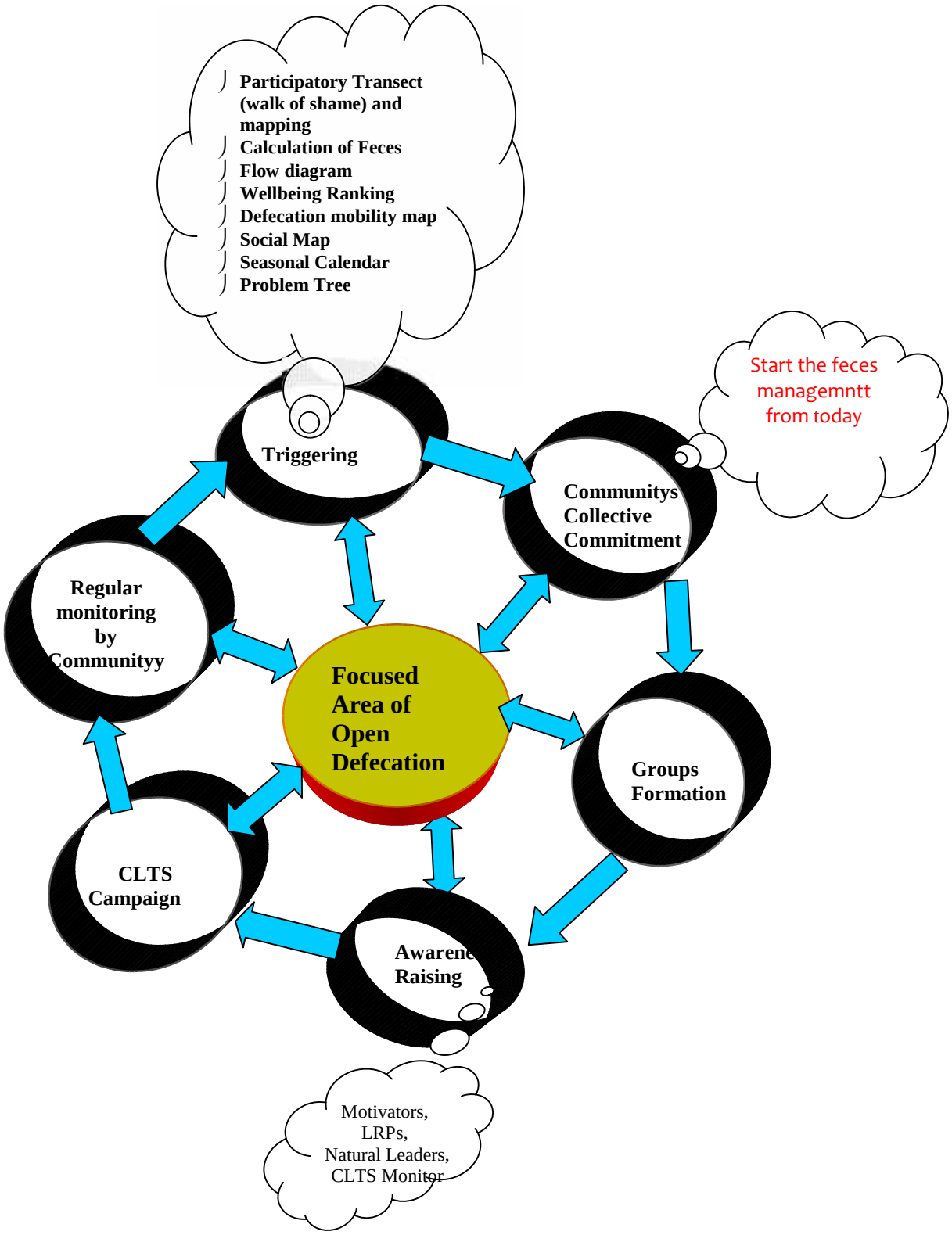
Source: Care Nepal.

Community Led Total Sanitation (CLTS) is an innovative approach that empowers local communities to stop open defecation by making latrines without external hardware subsidies. Participatory Rural Appraisal (PRA) tools have been using to understand the poor sanitation and realize the impact on health. The process is concentrated a “total sanitized community” through creating self-help – "no direct subsidy and no service delivery from any external agencies", particularly the involvement of entire community and a multi-stakeholders participation. The program focuses more on local culture, context, material, creativity and innovation (‘learning by doing). Local people have encouraged and respected to come up with their own ideas and actions. Similarly, more focus was given to implement for solutions that suited as their needs and existing resources.

This process led to sustainable outcomes and positive impact such as wishing to retain hygienic behaviors, scaling up of the initiatives. As such the whole villages become Open Defecation Free that means Peace promotion center, Sanitation Action Groups and its networks will act as pressure groups against any relapses into traditional behaviors.

`

4.1.4 Process Vector for CLTS Declaration



Source: Care Nepal.

`

CHAPTER – FIVE

DATA PROCESSING, ANALYSIS AND PRESENTATION

After collecting the data, the tabulation of the data takes place. The collected information is presented in different table and graphs separately. The descriptive information is analyzed mainly in the bar diagrams, pie chart or according to the basis of percentage. The analysis and interpretation of the data have done in the descriptive form. The description data and simple mathematical interpretation adopted in this research.

Likewise, table is prepared from the completed questionnaire for tabulating different socio-economic characteristics. Such as income, education status, family size, caste, membership, experienced year of vegetable farming etc.

5.1 Setting

In Jugathapachaur VDC of Jajarkot district. This is located about 18 kosh far from the district headquarter, Jajarkot Khalanga. It is situated at the West directions of district headquarter.

5.2. Population

According to the national population census 2058 B.S.Nepal, the total number of houses in Jugathapachaur VDC is 50. But in case of Jugathapachaur VDC cluster is one of the of that VDC to have 50 households in total. In this cluster,the chhetri are majority in habitants, other castes are dalit and non dalit .

Analysis –Table 1, Population Composition of the study area by caste

Caste /Ethnicity	No	%	Caste / Ethnicity	No	%
Chhetri	2714	65.18	Brahman hill	142	3.41
Thakuri	316	7.62	Unidentified dalit	12	0.28
Kami	755	18.13	Unidentified cast	2	0.04
Dami	146	3.5	Sanyasi	40	0.96
Sonar	22	0.52	Badi	12	0.28
Muslim	2	0.04	Koiri	1	0.02

Total: 4164

Source: census, 2058 B.S.

`

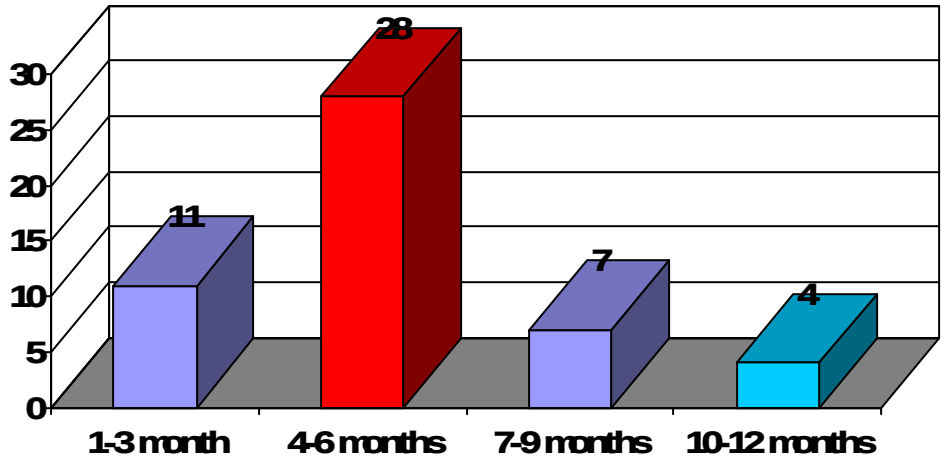
As the table shows the dalit and non dalit The maximum respondents of the study area were covered by dalit and non dalit whose numbers are 25 out of 50

Analysis- Table 2, Yearly food- Sufficency

Food covering month	1-3 month	4-6 months	7-9 months	10-12 months
Households	11	28	7	4

Source: Field Survey, 2014

Analysis –Table 2, Food Deficiency



The above Analysis –Table 2 shows that 56 percent of household have food deficiency from 6-8 months throughout the year. Likewise 22% household have 9-11 month, 14% households have 3-5 months food deficiency throughout the year. Only 8% households non-dalit family have their food sufficiency in year round ‘s bread and butter i.e. 10-12 months. In which maize is found the main food for their livelihood.

`

Analysis Table 3– Perceptional observation of community behavior change before and after CLTS

Behaviour → time ↓	Food Habits	Clothing	Living Style	Defecation	Leadership
Before CLTS	Normal food	Few local made and few factory made	Traditional Houses	Open	Mukhiya and male member
After CLTS	Normal food & readymade cookies/ noodles	Same as above	Most of houses are modern typed	**Open defecation Totally closed**	Women and young boys and girls

The above table showed that before the implementation of CLTS, there was a cultural system of open defecation everywhere around the village periphery and flux of flies found abundantly. Community leadership has been handed over to women, girls and boys unlike before Mukhiya and male member were the main leaders settle down the issue of community.

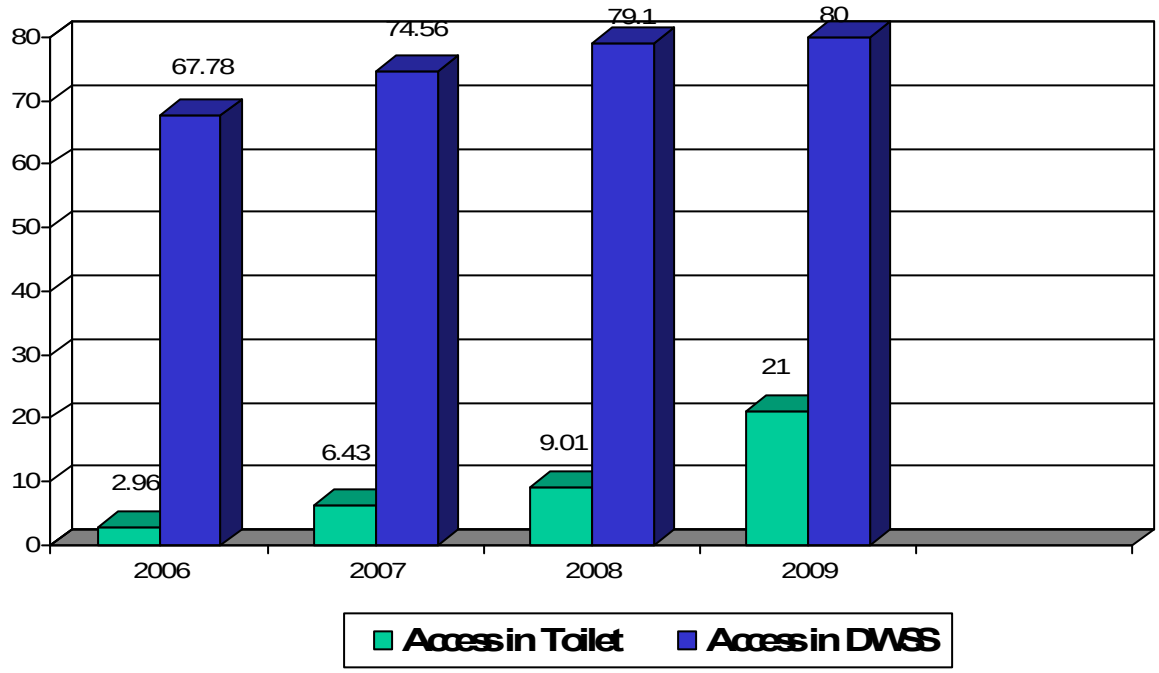
Analysis –Table 4 District Scenario of DWSS Vs. Sanitation of Jajarkot

Detail	2006	2007	2008	2009
Access to Toilet	2.96%	6.43%	9.01%	21%
Access to DWSS	67.78%	74.56%	79.1%	80%

Source: District Drinking Office Jajarkot

`

Graphical representation of Toilet and DWSS in Jajarkot District



The above **Analysis –Table 4** shows that the overall status of sanitation found pitiable with respect the Drinking Water Supply Systems implementation. Anyway, the trend of sanitation is progressing upwards with countable jump 12% within two year (2008to 2009) .

Analysis –Table 5 Family size of Jugathapachur VDC community

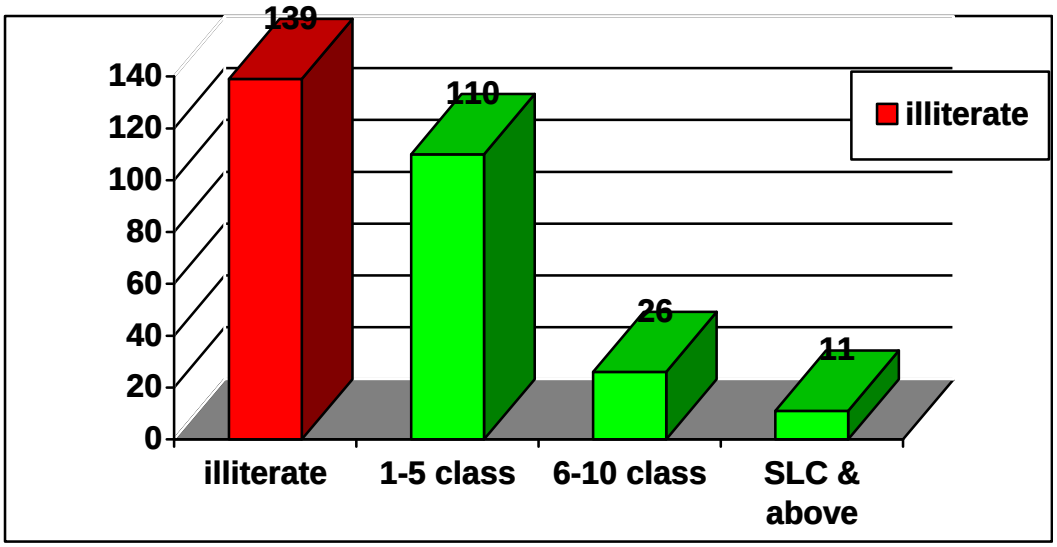
Family Size	Household	Percent
2-4	**8**	**32**
5-7	**13**	**52**
8-10	**4**	**16**
Total	**25**	**100**

Source: Field Survey, 2014

The above analysis –Table 5 shows the no. of households and distribution of family size present in Jajarkot. The household containing members ranging from 2-4 members is 8. Similarly, from the above analysis we can say that majority of the people live in the household ranging from 5 to 7 members.

`

Analysis –Graph 7, Education Status of the community



Comparing between the total family composition and education status, 48.6% of population are found illiterate, 47.5% people are literate and 3.8% people have passed the SLC. There is no one person who have education above SLC..

Analysis –Table 6, previous trend of Defecation verified by the respondents

Problem	Respondents		Total
	Yes	No	
Number of Toilet users	0	25	25
Number of people using open place	25	0	25
Number of people washing hand before eating	9	16	25
Number of people using water after defecation	8	17	25
Number of people cover food utensil for dirt protection	0	25	25
Number of people using sandal while using toilet	2	23	25
Number of people self shying seeing the new comer defecating	25	0	25
Number of people discouraging the new comer while defecating in open air	0	25	25

Source: Field Survey, 2014

`

As per the result table shown above with the respondents, there were not any toilet to manage the defecation and all community people have trend to defecate in open and public places as well as there was no more any mechanism of discouraging the users of open defecation rather than shying own- self who showed the defecator.

Analysis –Table 7, Present Trend of Defecation Rectified by the Respondents

Problem	Respondents		Total
	Yes	No	
Number of Toilet users	25	0	25
Number of people using open place	0	25	25
Number of people washing hand before eating	25	0	25
Number of people using water after defecation	25	0	25
Number of people cover food utensil for dirt protection	25	0	25
Number of people using sandal while using toilet	25	0	25
Number of people self shying seeing the new comer defecating	0	25	25
Number of people discouraging the new comer while defecating in open air	25	0	25
Number of household managed the domestic garbage	25	0	25

Source: Field Survey, 2014

The above analysis shows the vivid picture of present scenario of community environment found declared with respect to the CLTS in Jugathapachur VDC. Cent percent people have changed habit to utilizing the toilet. They have gained the awareness on the hygienic perspectives. Communities have mandatorily introduced the certain norms against the violation of set rules and regulation use of hoarding board, whistle blowing and discouraging new comer while defecated in open year). People have found changed habit on washing hand before and after defecation. All community members found familiar with water and stool borne diseases. Communities have managed the domestic garbage properly.100% data shows the food utensil covered to escape from flies' contamination.

`

Analysis –Table 8, Kinds of Material Used in Toilet

Details	Respondents		
	Yes	No.	%
Number of Toilet constructed by using local material	25	0	100%
Number of Toilet constructed by cement masonry	0	25	100%
Number of Toilet constructed by slate + pine wood roofing	0	25	100 %
Number of Toilet constructed by grass+ pine wood roofing	25	0	100 %

Source: Field Survey, 2014

This table showed the material used in toilets construction and total community contribution for the initiation of open defecation free zone. People have prepared the toilet completely in sustainable approach, where as the materials used in construction is totally locally available. Thus, 100% constructions are local material used.

Analysis table 9 monitoring and sustainability analysis

Details	Respondents		
	yes	No.	Total
Number of case registered by whistle blowing during open defecation.	0	25	25
Number of case registered fined after open defecation masonry	2	23	25
No of events participation in exposure visit by LRP	5	20	25
No. of events facilitating other VDCs for CLTS by LRPs	3	22	25

Source: Field Survey, 2014

The above table showed that the internal monitoring mechanism of community against open ground user found restricted. LRPs have facilitated to other VDCs of CLTS s' declaration after the successful achievement of CLTS declaration. After the CLTS program people realized and were aware that after using toilets, they should wash their hands with water and soap.

`

CHAPTER - SIX
SUMMARY, CONCLUSIONS AND RECOMMENDATION

6.1 Summary

The aim of this study is to examine to community led sanitation and program and practice with specific objectives to analyze community participation and involvement for CLTS program and practice as well as analyzing previous hygienic knowledge with respect to present context and positive as well as negative impact of CLTS program.

Firstly, the process of field level interpenetration documented and practice has properly recorded. Secondly, the motivational factors for latrines adaptation in successful project area are explored in order to facilitate learning, and transfer in other area of intervention. Thirdly, the sustainability aspect of the process found more effective from applied different monitoring mechanism at local levels.

From the document studies and completed research found the success of the approach in achieving an end to open defecation seems to hinge on the viability of wide choice of safe latrine construction that suit too financial abilities of community's people. The challenging part on dreaming of sustainability run into in fact due to strong community monitoring systems.

Overall; personal prestige, changing mentality, transformation leadership and habits, community participation, and community interest are found the prime factor to meet the research goal as set before.

6.2 Conclusion

1. Community let total sanitation can be introduced successfully in every society if internal monitoring mechanism of community could sustained.
2. Most of community had mentality being toilet construction without subsidy is not possible, which is not found true. If people really owned the interest, all people including **have and have not** can construct the required toilet like their house construction by themselves.

`

3. Making of toilet in mind for everybody is more important than construction of toilet on the ground.
4. Leadership transformed to youngster could able to transform the society from traditional habit to modern style.

6.3 Recommendations

1. Subsidy support to the people for toilet construction should be totally discouraged. Otherwise, people have ill intension of trapping economic opportunity only rather than the feeling and importance of defecation management and changing traditional habit.
2. Resource person of CLTS program should be chosen from local community to ensure the sustainable monitoring mechanism as well as cost effectiveness of schemes.
3. Women and school children (youth) groups are found more effective to declare CLTS than other mixed groups. Thus, this approach should be adopted in all policy level of intervention.
4. Making aware and internalization of importance by triggering of defecation management part is found more essential tools than the traditional training and lecture on CLTS. Thus main focused to be done in triggering in defecation campaign.
5. Overall prestige and a desire to keep up with neighbors was the strongest motivational factor for latrine adaptation. So, honor the community in optimum level to make more successful in CLTS.
6. Location of toilet should be accessible to all. Specially kids and old-ager should be focused more for its effective use. Thus distant toilet should be discouraged
7. Progress of Sanitation as district wise is sure while all sanitation stakeholders could make the program mandatory and community oriented. But the area should be limited and targeted people should identify as per the capacity of resource persons.

`

BIBLIOGRAPHY

Central Bureau of Statistics (2002). *National Planning Commission Secretariat*. Kathmandu: Central Bureau of Statistics.

Hanchett, S. (2008). *Rural water sharing, sanitation and hygiene*. *Handbook on Community-Led Total Sanitation (2000)*. Australia: Launch of International Year of Sanitation in Australia.

Kamal, K. & Chambers, R. (2008). *Hand book on Community-Led Total Sanitation*. Bangladesh.

Kamal, K. (2000). *Subsidy or self respect, participatory total community sanitation in Bangladesh*. Brighton: Institute of development studies.

Kamal, K. (2005). *Practical Guide to Triggering Community-Led Total Sanitation*.

Ministry of Housing and Physical Planning (2064). *Report on epidemic diarrhea control and prevention.* Kathmandu: Ministry of Housing and Physical Planning

National Academy of Science (2005). *Safe Drinking is Essential- Sanitation in Cambodia*. Cambodia: National Academy of Science

Nepal Water for Health (2000). *Result of Research Study*. *Water supply and Sanitation of Urban poor in Kathmandu valley*. Kathmandu: Nepal Water for Health

Nepal Water for Health (2004). *An Exploratory Research Study on the Discomfort faced by Pregnant Women, Elderly, Overweight, Sick and Disabled People when using squat Latrines*. Kathmandu: Nepal Water for Health

Sophie C. A. (2009). *The Water Aid Bangladesh / VERC100% Sanitation Approach: Cost, Motivation and Sustainability*. London: School of hygiene and Tropical medicine.

Steering Committee of National Sanitation Action (2008). *Nepal Country Plan for the International Year of Sanitation*. Kathmandu: Department of water and Sanitation

`

Total Sanitation Process in Community Leading (2064). *Resource Center Network Nepal Community Let Total Sanitation*. Kathmandu: Total Sanitation Process in Community Leading

UNDP (2004), *Meeting Millennium Development Goal in Nepal*. Kathmandu: UNDP.

Water Supply Sanitation and Collaborative Council (2000). *Investing in Sustainable Sanitation and Hygiene*. Kathmandu: Water supply Sanitation and Collaborative Council

World Health Organization (2009). *Water, Sanitation and Hygiene Standards for Schools in Low-cost Settings*. Geneva: WHO

`

ANNEXCES

BEFORE- CLTS

Picture 1 Previous trend of open defecation (Picture taken in August, 2008)

Picture 2.1 Mismanagement of water jar/Jerri- cane before CLTS

`

Picture 2.2 (Flux of Flies in August, 2008)

Picture 3, Real Case of Ascrise's Victim

अप्रत्यक्ष रुपमा हिंसा मुखमा जांदाको परिणम

`

Picture -4, Main food grain of jajarkot

Picture -5, Culture of defecating in open air Before CLTS

साने देखि लागेको बानी

`

Picture-6 Diarrhea Victim family of Jajarkot (Kantipur Publication August 8, 2009)

`

AFTER- CLTS

Picture 7, Changed habit of kids using toilets from open defecation, after CLTS

Picture 8 , Water-Jar covered to escape for insect contamination after CLTS

(Spot Photo of Jajarkot taken during monitoring visit by LAs)

Picture -9, Toilets , constructed totally from local material (Grass Roof and mud plaster)

`

Picture -10 Madhya- Paschim Publication , issue of toilet (November-4 2009)

चर्पी नभएको
घरमा छोरी नदिने

Picture -11 Whistling campaign to community against open defecation at Jajarkot

`

1	How did the 100% sanitation idea get started in the village?
2	What types of latrines do people have?
3	Why do people choose certain latrines over others?
4	Does everyone have access to a latrine now?
5	Who in the family decides what sort of latrine to have?
6	What happens if people have no space for a latrine construction?
7	What happens if people don't have enough money for a latrine construction?
8	Why do people use the latrines?
9	What happens with children's feces in courtyard?
10	What happens when the latrines fill up with stool ?
11	What affected whether people changed their behavior?
12	Were certain behaviors easier to change than others?
13	Did certain groups of people change more easily than others? Why?
14	By what means did Motivator encourage others?
15	If you were asked to convince a different village to become 100% sanitized how would you do it?
16	Are there any things that you would get them to do differently than others?

Table -10 Open group discussion held at Jajarkot

`

Questionnaires for Household Survey

General

1) Name of Respondent:-

2) Age:-

3) Date of Interview:- District:-

4) VDC:- Ward:-

Gender :- Male/ Female

5) Educational Qualification]

Illiterate: - ☐ Literate: - ☐ others:- ☐

6) Family :-

6.1) Total no. of Family ☐

6.2) Male ☐

6.3) Female ☐

7) Do you know about sanitation ?

7.1) Yes 7.2) No

8) If Yes, since when the sanitation started?

8.1) Since one year onwards 8.2) Since two years onwards 8.3.) Since there year onwards

9) What do you know the sanitation work?

9.1)

9.2)

9.3)

9.4)

9.5)

10) Do you have the sanitation practice?

10.1) Yes 10.2) No

Condition Prior to Community Led Total Sanitation (CLTS)

11) What was the condition of village in line of sanitation context before?

11.1)

11.2)

11.3)

11.4)

`

11.5)

11.6)

12) What you had the practice of defecation before constructing the toilets?

12.1) Children;

a) In toilets b) In yards c) Open area

12.2) Males;

a) In toilets b) on yards c) Open area

12.3) Females;

a) In toilets b) on yards c) Open area

13) What you had to do while new- comers defecated in the periphery of your village?

a) Cursed to him/her b) Punished to him/her c) Nothing to do

14) Did you use to wash your hand after your defecation?

a) Yes b) No

15) If Yes, when you used to wash your hand?

- After defecation: a) Yes b) No
- Before cooking food: a) Yes b) No
- Before eating food: a) Yes b) No
- After eating food : a) Yes b) No
- After touching the dirt: a) Yes b) No

16) How did you wash your hands before CLTS?

a) with soap and water b) with ash and mud c) with water only

d) if others specify..,

17) Protection of food and drinking water

17.1) By what means did you clean the the utensilts used in your food and drink before ?

a) Used of mud and ash or mud and water b) Used of soap and water

c) Used of water only 3) if others specify

18) Had you use to keep open your food and drinking water ?

a) Yes b) No

19) If yes, observe and specify.....

20) Do you had idia on food contamination and its affect to us ?

a) Yes b) No

`

21) By then, what were the common causes of getting sick?

a)

b)

c)

d)

22) How was the waste water management by then?

<u>Situation After Implementation of Community Let Total Sanitation</u>

23) At present, where do you defecate?

a) In toilet b) on yards c) Open area

24) In your view, is stool harmful for us?

a) Yes b) No c) Don't know

25) Do you have facilities as defined below (tick only)?

a) Soap b) Ash c) Water d) Towel

26) Do you wash your hand?

a) Yes b) No, we don'

27) Do you know the Importance of hand-washing ?

a) Yes b) No

27.1) If yes, why it is urgent to wash your hands before and after eating / touching food and drinks?

a) To be secured form diarrhea

b) To be protected from communicable diseases

c) To be secured from stool entering into the mouth

d) If other, specify….

28) When do you wash your hands?

- After defecation: a) Yes b) No
- Before cooking food: a) Yes b) No
- Before eating food: a) Yes b) No
- After eating food : a) Yes b) No
- After touching the dirt: a) Yes b) No

`

29) How would you wash your hands now ?

a) with soap ans water b) with ash and mud c) with water

d) if others , specify...

30) How does the communicable diseases spread out to human being ?

- From dirty and filthy matter a) yes b) No c) Don't know
- From flies a) yes b) No c) Don't know
- From dirty water a) yes b) No c) Don't know
- From vegetables a) yes b) No c) Don't know
- From birds and animals a) yes b) No c) Don't know
- If others, specify..

31) Safety of food and drinking water

31.1) **By what means did you clean the the utensilts used in your food and drink?**

a) with mud and water b) with soap and water

c) water and husk d)with water only

e) if others, specify

32) Do you cover your food and drink to protect from dirts/flies ?

a) Yes, we cover b) No, we don't cover

33) If yes, observe and specify…

34) What you do at presnt to keep clean the house yard daily?

a)

b)

c)

d)

35) Do you deficate in open area while you are in collection of fodder in Jungle ?

a) Yes, we do b) No, we don't

36) If yes, how do you manage the stool?

a) Digging small ditch to stool and covering by soil fill

b) Deficatin in the place where others do not see us

`

37) What you do now while new- comers defecated in the periphery of your village?

a) Cursing and insulting him/her b) Punish c) Nothing to do

38) What are the human diseases that communicate from filthy phenomena ?

a)

b)

c)

d)

e)

f)

39) How do you manage the waste water in your house (observation) ?

a) Vegetable garden b) In sewer drain d) If other, specify..

40) Does the waste water empounding near by your house complex?

a) Yes b) No

41) If yes, is it right way exposing waste water ?

a)Yes b) No c) I don't know

42) What you used to do while getting sick ?

a) Consulting Doctor b) Use of traditional healer c) If other specify

43) How far the healthpost from your house?

a) Near by the village b) Half- day walk c) one-day walk

44) Who check the patients ?

a) Doctors b) Health Assistants c) Peon (Helper of health post)

45) Do the all types of medicines available in Health post ?

a) Yes b) No

46) How much your family income per year ?

47) What is the main occupation of your family ?

a) Agriculture b)Business c)Service d) If others, specify