



**SCHOOL OF CONTINUING EDUCATION  
INDIRA GANDHI NATIONAL OPEN UNIVERSITY  
MAIDAN GARHI, NEW DELHI-110068**

**EVALUATION THE IMPACT OF WORLD VISION ETHIOPIA, WATER,  
SANITATION AND HYGIENE PROJECT ON THE COMMUNITY: THE CASE  
OF AMHARA REGION, WEST GOJAM ZONE, JABI TEHNANE WOREDA**

**By  
TAYE TIBEBU DESALEGN**

**SEP, 2016**

**Addis Ababa, Ethiopia**



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**SUBMITTED BY ; TAYE TIBEBU DESALEGN**

**ENROLMENT NO: 1320491**

**ADVISOR;- Dr MULUGETA TAYE**

**A DISSERTATION SUBMITTED TO INDIRA GANDHI NATIONAL OPEN UNIVERSITY  
SCHOOL OF CONTINUING EDUCATION POST GRADUATE PROGRAMMES, ADDIS  
ABABA, ETHIOPIA**

**IN PARTIAL FULFILLMENT OF THE REQUIRMENTS FOR THE DEGREE OF  
MASTER'S PROGRAMME IN RURAL DEVELOPMENT, M.A.(RD).**

**SEP, 2016**

**Addis Ababa, Ethiopia**

# DECLARATION

I hereby declare that the Dissertation entitled

***EVALUATION THE IMPACT OF WORLD VISION ETHIOPIA, WATER, SANITATION AND HYGIENE PROJECT ON THE COMMUNITY , THE CASE OF AMHARA REGION, WEST GOJAM ZONE, JABI TEHNANE WOREDA***

Submitted by me for the partial fulfillment of the M.A in Rural Development to Indira Gandhi National Open University, (IGNOU) New Delhi is my own original work and has not been submitted earlier either to IGNOU or to any other institution for the fulfillment of the requirement for any course of study. I also declare that no chapter of this manuscript in whole or in part is lifted and incorporated in this report from any earlier work done by me or others.

Place: Addis Ababa, Ethiopia      Signature: \_\_\_\_\_

Date: Sep 22, 2016

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## CERTIFICATE

This is to certify that Mr. Taye Tibebe , student of M.A. (RD) from Indira Gandhi National Open University, New Delhi was working under my supervision and guidance for his project work for the course of MRDP-001. His project work entitled **EVALUATION THE IMPACT OF WORLD VISION ETHIOPIA, WATER, SANITATION AND HYGIENE PROJECT ON THE COMMUNITY, THE CASE OF AMHARA REGION, WEST GOJAM ZONE, JABI TEHNANE WOREDA** which he is submitting, is his genuine and original work.

Place: Addis Ababa, Ethiopia

Signature: \_\_\_\_\_

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## List of Acronyms

WASH	Water sanitation and hygiene
NGOs	Non-governmental offices
CSA	Central statics agency
ADP	Area development programs
WVE	World Vision Ethiopia
WV	World Vision
WHO	World health organization
OWNP	One WASH National Program
SWAp	sector wide approach
SI	Sampling Interval
PFA	Primary focus Area
PLC	Private limited company
FGD	Focus Group discussion
BoFED	Bureau of finance and economy
AMCOW	African Ministry's Council on Water

WASH	Water ,sanitation and hygiene
WHO/UNICEF	World Health Organization
EDHS	Ethiopia demographic health survey
HWWS	Hand washing with soap
KA	Kebele Administration/The lowest administrative unit of government/
GTP	Growth and transformation plan
OWNP	One wash national program,
ODF	Open defecation free village
ARI	Acute respiratory infections
CLTS	Community lead total sanitation
HH	House Hold
MDG	Millennium development goals
CLTS	Community lead total sanitation
MUS	multiple use water services

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## **Abstract**

Water is life. It is a basic need for human being welfare. Adequate domestic water supply is an entry point to sustainable development. However. Approximately 780 million people, 11% of the world's population, remain without safe drinking water, and over 2 billion or 37% of the world's population remain without safe sanitation methods.

To solve this basic problem of the community governmental and non-governmental organizations have been implementing water supply and sanitation projects so far, many lack sustainability due to improper management. This is attributed to the implementation modalities and the level of community engagement .Among the Non governmental organizations World Vision Ethiopia/WVE/Is the primary international NGO in the Amhara region and Jabi tehnane Woreda in particular engaged in water supply ,sanitation and hygiene works.

*Accordingly Study were conducted to evaluate the impact of world Vision Ethiopia, Jabi tehnane ADP water, sanitation and hygiene project on the community. The study followed quantitative and qualitative survey. To make this real a random sample of 40 villages were selected from 39KAs and then a total of 400 households (10 households from each cluster) selected using systematic random sampling. The focus group were also organized to address grass root beneficiaries composed of Kebele leaders and user community. Literature*

*review is part of the evaluation which considered review of reports of government and WVE.*

*The project implementation strategy of WVE primarily emphasized working with partners, especially with government offices and through Community participation. The discussion with FGDs shown as that WVE have solved their critical water shortage problem and enhanced their sanitation and hygiene practices. The community has participated in WVE project in various ways, in kind, in Cash and in labor during water supply scheme construction and sanitation and hygiene campaign.*

*The evaluation study found that WVE Jabi tehnane Area development program have improved the potable water coverage from 51.62% in 2007 to 54 % . while the review of secondary data shows improvement from 42 % in2007 to 66.36 % in 2016.WVE alone have contributed for 13% increment in water coverage by constructing 165 water schemes which benefited 26,500 populations.*

*Sanitation facilities improved from in 50% to 88.5 %, this show 38.5 % increament in private latrine coverage . Regarding community led total sanitation out of 39 KAs 35 have declared open defecation free .The hygiene practices have also improved. The survey found out that 57.3 % of respondents wash hands with soap. While 81 % of the respondents wash their hand at least at four critical times. Diarrhea among under 5 children reduced from 32 % to 29 %.*

## 1 Introduction

Water is one of the primary driving forces for sustainable development of any country, where its environmental, social and economic development are to a large extent dependent on improved water supply services. (Yewondwosen, 2012). Access to water supply and sanitation is a fundamental need and a human right (Global Water and Sanitation Assessment report, 2000).

Universal access to water and sanitation could prevent thousands of child deaths and could give ample time for women and children to go to work or school. In Ethiopia, access to rural water supply was among the lowest in the sub-Saharan Africa. However, over recent years, access to water supply has been on an increasing trend in rural Ethiopia. Though different data sources show different figures, all sources confirm that water supply in rural Ethiopia is on a strong upward trajectory. (Yewondwosen, 2012). The official government data states that rural water supply coverage has risen from 11% in 1990 to 62% in 2009, (AMCOW, 2010). The AMCOW second round Country Status Report 2010, also shows a remarkable increase in coverage, i.e. 1 million people per year for the period 1990 – 2008 at the national level (AMCOW, 2010)

Increasing the number of people with access to safe water supply, sanitation and hygiene has proven to be a tremendous challenge throughout the developing world. Despite huge investments over the years in the water and sanitation sector in the Amhara Region, millions of rural poor communities still remain without adequate water supply and lack improved sanitation services. Although numerous schemes have been planned and implemented in Ethiopia, only a proportion of these schemes continue to provide water to the communities that they were intended to serve. The failure in service may have been caused by a multitude of reasons including poor technology selection, insufficient maintenance, malfunctioning equipment, inadequate community planning or participation and many others. By recognizing the combination of factors that have led to the success or failure of a water scheme, more meaningful and enhanced strategies can be arranged and employed for the preparation and implementation of more successful schemes. Therefore, the chief factors of each Water, Sanitation and Hygiene (WaSH) scheme should be fully documented by implementers, other partners and the communities being served by them in order to better explore a scheme's likelihood of remaining functional and challenges to its sustainability. (Seifu et al ,2010).

Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in

households and across communities. Provision of water and sanitation also plays an essential role in protecting human health during crisis and disease outbreaks.

Ethiopia has made remarkable progress in water and sanitation over the last two decades. According to WHO/UNICEF Joint Monitoring Programme 2014 report, the country has improved water supply by 57% (97% in urban areas and 42% in rural areas), thus achieving the Millennium Development Goal (MDG) 7 target 7C. Although the sanitation target has not yet been achieved, there has been tremendous progress during the past decade in improving sanitation and ending open defecation. The progress has been largely due to the establishment of a Government-led WASH coordination mechanism (ONE WASH programme) involving Ministry of Water, Health, Education and Finance and Economic Development, as well as development partners. (WHO/UNICEF Joint Monitoring Programme 2014 report)

Despite the progress seen in Ethiopia, 43% of the population does not have access to an improved water source and 28% practice open defecation.(NWI 2012) .The National WASH Inventory (NWI) report of 2012 also indicates that the majority of health facilities in Ethiopia lack access to clean water and only about 32% have access to safe water. Moreover, 17% of childhood deaths are associated with diarrhea (EDHS 2011) which remains the third leading cause of under-five mortality attributed to poor water, sanitation and hygiene.( WHO,2016.)

Before World Vision's involvement in the communities, an intermittent access to safe and sufficient water left many families (in particular, women and children), carrying water (not always of good quality) over long distances to serve their drinking, cooking, and washing needs. Many villages had a sanitary history of open defecation, or the use of 'bush toilets' (open dry pit) which not only caused environmental problems in terms of spreading pollution and pathogens, but such pathogens in the environment can be transmitted and can cause incidences of eye and abdominal disease in children. Excreta washed to water sources exposed these communities to larger health risks that in some cases increased medical expenses and reduced productivity due to increased incidence of water borne disease.

World Vision Ethiopia Jabi tehane Area development WASH project sought to improve access to safe water ,sanitation and hygiene in the target communities by supporting in the construction of water supply schemes and implementing community led total sanitations, improving the capacity of communities towards practice of good hygiene behaviors

## **1.1 Statement of the problem**

Water is one of the primary driving forces for sustainable development of any country. The environmental, social and economic development of a country is to a large extent dependent on improved water security through effective

management of water resources. However, sustainability of rural water supply schemes, and the benefits they deliver, has now become one of the superseding concerns of the sector. Every year millions of dollars are invested by international financiers and national governments, for project implementation, despite increasing attempt to tackle the limiting factors, and many still fail to maintain the flow of expected benefits over their intended lifetimes of 10, or even 15 years, (WSP-Africa, 2010)

According to CSA 2007 census report the potable water coverage of Jabi tehnane Woreda is 42 % ( 91 % for urban and 39 % for rural dwellers ). Regarding toilet facilities utilization 50 % of the communities do not have any toilet facility that means they practice open defecation.Regarding waste disposal 89 % of rural and 59.9 of urban dwellers dispose waste on open space around their homestead. Looking Diarhoea prevalence 32 % of children under 5 years age were vulnerable for diahorea according to WV survey in 2007. World Vision Ethiopia Jabi Tehnane Area development program planned implemented Water, sanitation and hygiene project by allocating large amount of budget and human resources to solve this problems. As a result many water supply structures were built and empowerment training on hygiene and sanitation were conducted. Evaluation of 5 years the program 2008-20012 were held in 2012.Now this research will evaluate eight years project implementation from

2008-2015. Most projects fail to attain their goal due to different reasons though huge amount of human and financial resources are invested.

**Project Goal** :-Improve access to adequate safe water and sanitation and hygiene practices.

**Project Outcomes 1.** Improve access to sustainable and adequate safe water supplies.

**Project Outcome 2.**Improve sanitation services for Vulnerable Children & Communities.

**Project Outcome 3** .Improved hygiene practices

**Project Outcome 4.** Increase community capacity to manage water supply schemes.

## **1.2 Objective of the study**

The final evaluation report of Water aid Ethiopia studied on 2010 states, although numerous schemes have been planned and implemented in Ethiopia, only a proportion of these schemes continue to provide water to the communities that they were intended to serve. The failure in service may have been caused by a multitude of reasons including poor technology selection, insufficient maintenance, malfunctioning equipment, inadequate community planning or participation and many others.

Hence the purpose of this evaluation was

- to assess the performance and outcomes of the project,
- the challenges encountered during program implementation,
- Asses strengths, Weakness, of the program, and document the lessons learned for future programming.

### 1.3. Specific Research Questions

- ✓ How much population benefited from WV water supply projects?
- ✓ Impact of these water schemes on life of communities, Do diarrhorria and water borne diseases reduced after intervention?
- ✓ Does behavioral practices on sanitation and hygiene improved after WV intervention?
- ✓ Does the community owned the water supply schemes constructed by world vision and participated during the project planning and implementation?
- ✓ How much is institutional wash status.
- ✓ How much of the water supply schemes are functional to day?

#### **1.4. Scope of the Study**

This study was designed to assess the plan and achievement, functionality, and utilization of Water supply projects implemented by World vision. Accordingly, the specific areas of focus are as follows.

I. Planning and implementation – The research will analyses how many planed water supply and sanitation schemes were accomplished,

II. Functionality –functionality refers to the number or percentage of functional water supply schemes.

III. Community participation and ownership-Do the community participate in Cash, in kind and labor during construction. Do the water supply schemes are handed over appropriately. Do each water supply scheme have active water committee.

#### **1.5. Organization of the Document**

This document consists of five main sections as follows. The following section (section two) focuses on the theoretical background, with a main concern on, water supply, sanitation, hygiene and community participation, In Section three, the research methodology and framework employed, and the sampling procedures adopted to gather the required relative information, are outlined. Section four deals with analytical description of the findings, with empirical evidence obtained from site visits and secondary sources. The last section,

section five, presents conclusions and recommendations on a number of specific issues and suggests areas for further research.

### 1.6. Definition of Important Terms In This Project

- **Water Supply Projects** - In this study, the term "Water Supply Project" refers to the simple rural water supply schemes i.e shallow wells, hand-dug wells and spring development and Rope Pumps.
- **Community** - In the present study, the term "Community" would mean a group of people living in a specific proximity, and who are beneficiaries of a rural water supply scheme constructed in their vicinity.
- **Access to water supply** – Availability of improved water sources within 1 km distance or 30 minutes round trip water hauling time .
- **Home treatment of water**- involves any method proven to be effective in removing or killing pathogens such as boiling, adding bleach or chlorine, using water filter, solar disinfection and settling.
- **Hygienic practices**- are washing hands at critical times, proper handling & storage of water, keeping latrines clean and proper disposal of child's feces.
- **Improved sanitation facilities**- are those more likely to ensure privacy and hygienic use /easily cleanable includes connection to public sewer, connection to septic tank, pour-flush latrine, simple pit latrine and ventilated improved pit latrine,

- **Improved water source**- includes household connection, public stand pipe, borehole, protected dug well, protected spring and rain water collection.
- **Safe handling of water**- getting water from a container by separate dipper or container with spigot of or narrow neck container.
- **Sanitation**- latrine
- **Unimproved sanitation**- includes bucket latrine where excreta are manually removed, public latrines and latrines with an open pit (35)

**Functionality** – under the present study, the term functionality refers to the number or percentage of currently working/operational rural water supply schemes out of the total number of rural water supply schemes constructed over the previous years.

**Woreda** - is the lowest administration unit (next to Kebele), in the Ethiopian government's administrative hierarchy.

**Kebele** - Is the lowest administration unit in the Ethiopian government's administrative hierarchy.

## 2. LITERATURE REVIEW

### **Extent of water supply coverage**

The United Nations as well as the World Bank refers to the definitions provided by Global Water Supply and Sanitation Assessment 2000 Report by WHO/ UNICEF, for their understanding of the terms 'access to improved water supply and sanitation'. This assessment report defines access to water supply and sanitation in terms of the types of technology and levels of service afforded. For water, "Reasonable access" has been broadly defined as the availability of at least 20 liters per person per day from a source within one kilometer of the user's dwelling. Types of source that did not give reasonable and ready access to water for domestic hygiene purposes, such as tanker trucks and bottled water have not been included. For sanitation, the excreta disposal system was considered adequate if it was private or shared (but not public) and if it hygienically separated human excreta from human contact.

According to the World Bank Access to improved water source is the share of the population with reasonable access to an adequate amount of safe water (including treated surface water and untreated but uncontaminated water, such as from springs, sanitary wells, and protected boreholes). In urban areas the source may be a public fountain or standpipe located not more than 200 meters away. In rural areas the definition implies that members of the household

do not have to spend a disproportionate part of the day fetching water. An adequate amount of water is that needed to satisfy metabolic, hygienic, and domestic requirements, usually about 20 liters of safe water a person per day. (Source: [www.worldbank.org](http://www.worldbank.org), retrieved April 2016 ). Similarly According to joint United Nations International Children's Emergency Fund (UNICEF)/WHO monitoring committee, improved drinking water sources include household connection, public standpipe, borehole, protected well, protected spring and rain water collection and within 1km or a 30 minute round trip distance. Studies have shown that those traveling great distance to collect water will reduce intake of water and use less safe water sources ( WHO/UNICEF Joint Monitoring Program for water supply and Sanitation. New York as Written in Manaye Siyoum 2009 )

Although numerous schemes have been planned and implemented in Ethiopia, only a proportion of these schemes continue to provide water to the communities that they were intended to serve. The failure in service may have been caused by a multitude of reasons including poor technology selection, insufficient maintenance, malfunctioning equipment, inadequate community planning or participation and many others. By recognizing the combination of factors that have led to the success or failure of a water scheme, more meaningful and enhanced strategies can be arranged and employed for the

preparation and implementation of more successful schemes. Therefore, the chief factors of each Water, Sanitation and Hygiene(WaSH) scheme should be fully documented by implementers, other partners and the Communities being served by them in order to better explore a scheme's likelihood of remaining functional and challenges to its sustainability. (Seifu A. Tilahun, Amy S. Collick, Manyahshal Ayele,2010).

Rural water supplies can be built to provide a range of services in addition to the domestic supply. These additional services are usually termed as multiple use water services (MUS), which include water for livestock, irrigation, home gardens or other small-scale productive uses in addition to water for drinking, washing and cooking. Multiple-use water services are intended to meet the domestic and productive demands of the poor in a more comprehensive manner. If appropriately planned, designed and managed, MUS have a much greater potential to reduce poverty, to lesson health hazards and to circumvent the vulnerability of rural households (Water aid, final evaluation report .April 2010).

In 2000, the United Nations created a global action plan consisting of eight Millennium Development Goals (MDGs) that address worldwide issues such as poverty, disease, food security, and human rights. Under the scope of environmental sustainability, the United Nations set a goal to halve the number of people without access to improved sanitation and improved drinking water sources by the year 2015 ("United Nations Millennium Development Goals,"n.d.).

Improved sanitation describes methods such as public sewerage systems, septic tanks, and pit latrines that safely remove excreta from potential human contact. Improved water describes sources that are protected from environmental contamination such as a protected spring or protected well (“WHO | Health through safe drinking water and basic sanitation,” n.d.). By 2010, the United Nations met their MDG target for drinking water, providing 2 billion people, mostly in India and China, with safe water sources. Despite this accomplishment, there are many countries showing little or no improvement in access to safe drinking water, and current rates of improvement suggest the United Nation’s sanitation goal will not be achieved by 2015. Approximately 780 million people, 11% of the world’s population, remain without safe drinking water, and over 2 billion or 37% of the world’s population remain without safe sanitation methods.

### **Sanitation and Hygiene**

The term “water-related disease” describes a variety of ailments, encompassing parasitic, bacterial, viral, chemical, and nutritional disorders. Many water-related diseases are transmitted through ingestion of food or water contaminated with human or animal fecal material but many others are caused by organisms that occur naturally in the aquatic environment. Malnutrition is also considered a water-related disease; frequent diarrhea can interfere with intestinal uptake of vital nutrients from food. Water-related diseases generally attack the gastrointestinal tract, and symptoms may include diarrhea, nausea, vomiting,

abdominal cramps, fever and weakness (“WHO | Water-related diseases,” n.d.). Though water-related diseases are often misclassified as “waterborne diseases,” the terms are not interchangeable. While waterborne diseases are transmitted only via the fecal-oral route, water-related diseases are transmitted in a variety of ways including washing of the skin or eyes or through insect vectors that breed in aquatic environments. Water, sanitation, and hygiene (WASH) interventions are shaped by route of transmission. Thus, an intervention for reducing waterborne disease may not simultaneously reduce water-related diseases (Threats, 2009).

Water-related diseases include waterborne diseases, but they also include tropical vector borne diseases such as malaria and yellow fever, diseases transported through aerosolized water such as legionellosis, and water-washed diseases such as trachoma. Malaria, caused by four species of *Plasmodium* parasites, causes approximately 660,000 deaths each year. These deaths are primarily in Africa where a child dies every minute from malarial infection (“WHO | Malaria,” n.d.). Trachoma is a debilitating disease caused by repeated infections of the bacteria *Chlamydia trachomatis*, which gradually turn the eyelashes of the infected inward, scratching the victim's cornea and producing scar tissue. Though trachoma is completely treatable and preventable, it still affects 150 million people each year, often resulting in visual impairment or total blindness (Brittan, 2013). Within low-income countries, diarrheal disease

associated with waterborne illness is the second leading cause of death, outranking HIV/AIDS and malaria in the number of lives lost in 2008 (“WHO | The top 10 causes of death,” n.d.). There are 2.5 billion cases of diarrheal disease each year among children alone. Although rotavirus is the most common cause of diarrheal disease, there is a higher risk of mortality.

Several technologies are available for treating water in the home, including Chlorination, storage in a narrow-mouth container; spigot designed to prevent recontamination, various types of filter, proper boiling, solar disinfection, combined chemical coagulation, flocculation and disinfection. Safe water in combination with a locally available antibiotic prophylaxis (cotrimoxazole) reduced diarrhea episodes by 67% (Manaye Siyum,2009)

Besides its impact on reducing the risk to contract diarrhoeal diseases, a recent study in Pakistan elucidate HWWS can reduce the number of pneumonia related infections in children under the age of five by more than 50 percent and impetigo by 34% (a skin disease) for children under 15. That study additionally confirms the considerable effectiveness of HWWS on reducing diarrhea (53% for children under 15) (Luby and colleagues 2005). Acute Respiratory Infections (ARI) (mainly pneumonia) and diarrheal infections are the number 1 and 2 under 5 killers that together account for 36% of non-neonatal deaths under 5 in the world (19% and 17% respectively) (WHO World health Report 2005). More evidence on the effect of HWWS on ARI is needed, but its potential should no longer be underestimated. (WHO World Health Report 2005 )

## **Ethiopia Water, sanitation and hygiene Status**

The Federal Government of Ethiopia is committed to fulfilling Target 10 of the MDG 7 -reducing by 50 per cent the proportion of the population without access to water and sanitation by the year 2015- thereby improving the overall health and socio-economic condition and quality of life of the population, especially children and women. Consequently, Ethiopia has adopted ambitious water, sanitation and hygiene targets through its “Universal Access Plan”, which seeks to reach 98.5 per cent and 100 per cent access to safe water and sanitation respectively by 2015.

The national hand washing strategy objectives includes:

- Increased proportion of household utilization of improved sanitation facilities from an estimated 31per cent to 84per cent,
- Increased proportion of schools with < 100 children per latrine stand with hand washing facilities,
- Increased proportion of households practicing hand washing with soap (or a substitute) at critical times from an estimated 7per cent to 77per cent,
- Increased proportion of Open Defecation Free (ODF) Kebeles from an estimated 15per cent to 80per cent and

- Increase the proportion of households practicing home water treatment and safe storage from an estimated 8per cent to 77per cent.

To enhance multi-sectorial coordination, the Ministries of Education, Health and Water resources signed a Memorandum of Understanding (MOU) in 2006 to enhance multi-sectorial coordination. The purpose of this MOU is to get the main partners of WASH sector involved in joint planning, implementation and monitoring of water supply, sanitation and hygiene education (WASH) in communities, schools and health institutions.

In early September One WASH National Program (OWNP) was launched. It is based on a sector wide approach (SWAp) and includes ministries of: water, health, education and finance and the principal development partners with implementation period of seven years covering the period from July 2013 to June 2015 for Phase I and from July 2015 to June 2020 for Phase II.OWNP has four components of:

- Rural and Pastoral WASH
- Urban WASH
- Institutional WASH
- Programme Management and Capacity Building

Essentially, the programme is moving away from small-scale project funding towards a broader programme approach. With this, not only government efforts are being harmonized but all actors involved agree on ONE common system.

While coordination among all the sectors involved is important cooperation is also critical to the success of school WASH programmes. The implementation of the WASH project will definitely contribute to improving the water supply and sanitation facilities in schools and Health Facilities.

### **Concept of Community Participation**

As per WHO guideline (1986), community participation is defined in simple terms as "...the involvement of people in a community in development projects." This guideline has managed to recognize the form and degree of people's involvement in development projects vary due to a variation in social, economic, educational, and other conditions in different communities. The guideline further states that "..., since it implies action by the people to solve their own problems, it can be understood in terms of activities performed by the communities in development projects. Broadly, this include

- Assessment of local situations
- Definition of the problem
- Setting of priorities
- Making decisions

- Planning of action programs to solve the problems
- Sharing responsibility in project implementation
- Evaluating and modifying the project

Thus any project that requires people in a community to be responsible for any one or more of the above activities could be called participatory."

(Yewendwossen, May 2012)

The concept of community participation in development philosophy gained momentum as early as the 1980s. The concept first took place in the health sector, where it was stated that communities should have the right to participate in the planning and implementation of their own health programs. Similarly, the importance of community participation in water supply and sanitation projects was recognized by planners, so as to make the projects successful. (IBID)

In addition, in rural water supply projects, it is often suggested that participatory planning is a key to maximizing the sense of ownership among beneficiary communities, which in turn is stimulated when beneficiaries are involved in key decisions related to the system, contribute towards the capital costs of system construction, and participate directly in planning and construction activities (Marks and Davis, 2011).

### **3. RESEARCH DESIGN**

Taking in to account the required level of precision, budget, time and operational constraint, a sample size of 400 was recommended as standard sample size for house hold survey. To make this real a random sample of 40 clusters (or villages) were selected from Kebele and then a total of 400 households (10 households from each cluster) selected using systematic random sampling technique.

#### **3.1. Research Methodology**

The methods used in the project evaluation included a literature review, interviews, field observation and focus group discussions (FGDs) with key stakeholders including project beneficiaries, local woreda staff, who had been involved in executing the project, and local authorities.

#### **3.2. Study Area**

Jabi Tehnan Woreda is found in west Gojam zone of Amhara National Regional State. The woreda's capital, Finote Selam is located at a distance of 380 Km North-West of Addis Ababa. The population of the Woreda is estimated to be 211,011 among which economically active population age 15 - 64 is 56.7 % . ( Source Amhara Region BoFED 2015 Forecast ).The average number of family size is 5. The male to female ratio is almost one to one. The predominant ethnic group is Amhara about 98 % and they speak Amharic. (Design Document, P.15, ) With regard to religious mix 97.05 % are Orthodox Christians, 2.84 % Muslims

and, 0.11% are Protestants. The majority of the population (93.8%) lives in the rural areas predominantly dependent on subsistence agriculture while the remaining (6.2%) live in urban or semi urban areas. The woreda have 39 kebeds of which 3 semi urban KAs. (WVE micro assessment report, 2007).

Table 1. Projected population number 2015/6

Location	Total population		Children under 2		Children under 5		Mothers
	F	M	F	M	F	M	
Rural	92622	91576	3570	3541	14280	14266	2871
Urban	18439	15650	700	595	2765	2347	530
Total	111061	107226	4270	4136	17045	16613	3401

Source; Jabi Tehnane Woreda Administration office report 2016

### Topography and climate

The altitude of the woreda ranges from 1,500-2,300 m. above sea level. The majority of the area lies in the higher altitude range, closer to 2,300 m, and all four of the project kebeles are found in the Woyna dega or mid-altitude area, each with similar agro-ecology and similar temperature and rainfall distribution. Agro-ecologically, 88% of the woreda is classified as Woyina Dega and the remaining 12% as kolla. The topography of the woreda is dominated by areas of plain. According to the woreda office of agriculture, the topography is classified as: 65% plain, 15% mountainous, 15% undulating, and 10% valley. The temperature

of the 'woreda' ranges between 14-32degree celcius, with an average annual temperature of 32degree Celsius. The rainfall distribution is uni-modal and the rainy season lasts for four months from mid-May to mid-September. The average annual rainfall is 1,250 mm per annum.

### **Land use ,soil and Livelihood**

Since the majority of the population lives in the rural area with crop production as the main livelihood option, arable land constituted the largest portion of the woreda land use type. The proportion and areas under different land uses in the woreda are as follows (woreda office of agriculture):

- Cultivated land: 49.8% or 58,262 ha
- Cultivable land: 4.4% or 5,208 ha
- Natural forest: 5.5 % or 6,502 ha
- Bush /scrub land or natural pasture: 17.6% or 20,662 ha
- Settlement: 9.3% or 10,931 ha
- Others: 13% or 15,389 ha

The soil type of the woreda is classified as 60% red soil, 25% brown, and 15% black soil. The soil fertility can be classified as 27% fertile, 71% medium and 2% infertile (source: woreda office of agriculture). The presence of well-developed fertile soil is considered to give the woreda strong potential for increasing the productivity of smallholding farmers.

Mixed farming, with crop and livestock production, constituted the main livelihood for the rural community of the project 'woreda'.

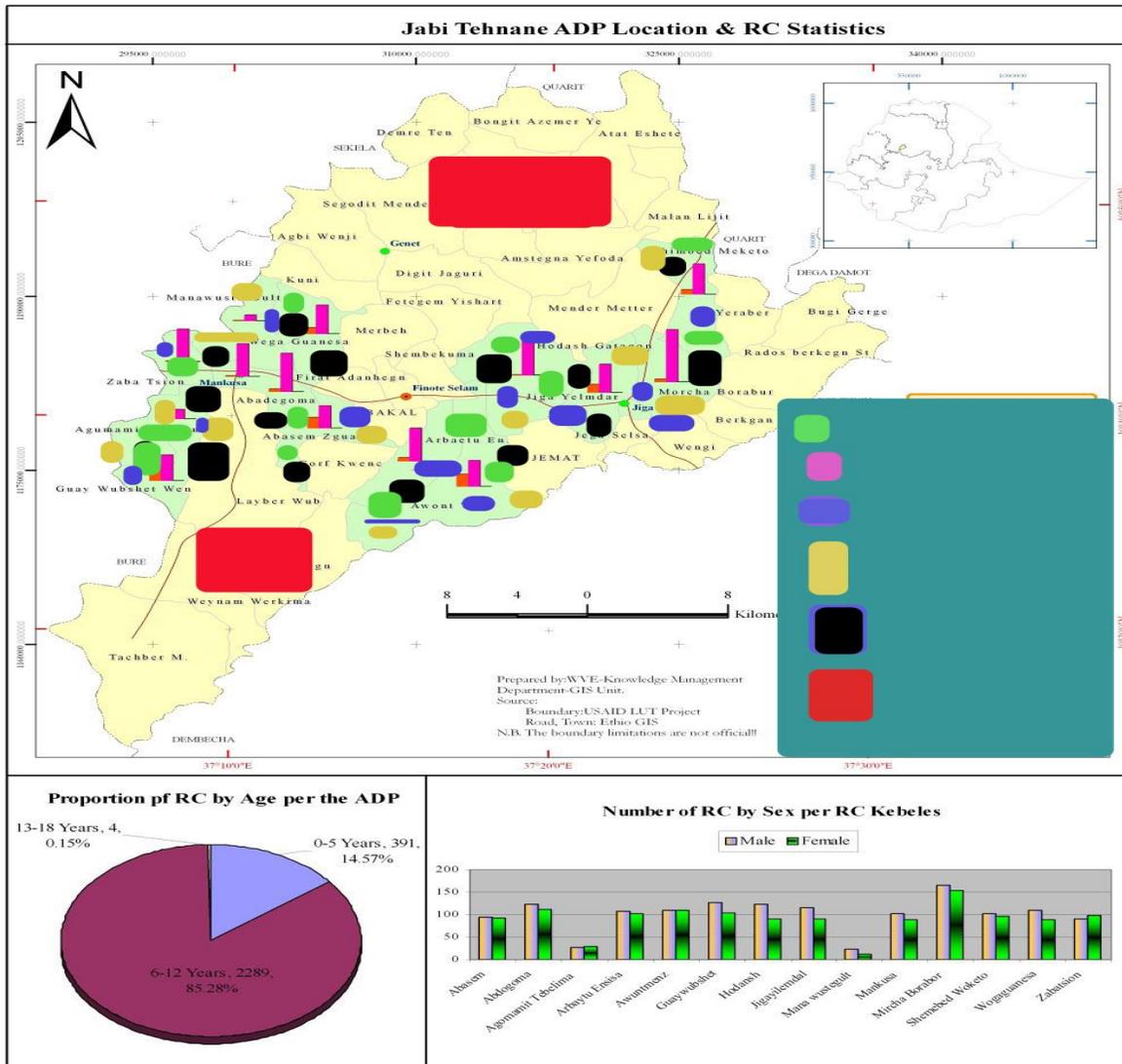


Fig 1. Map of Jabi tehname Woreda, & kebeles where WVE WASH project operational Kebeles (Source; WVE GIS Department ,2016 )

### 3.3 Sampling Procedures

#### Sampling households

Mix of two stage cluster sampling and systematic random sampling were applied to select the households or caregivers. First clusters/villages/gotes were selected applying PPS and then households will be selected with systematic random sampling method based on the sampling frame that will be prepared for the selected clusters. The sample size is determined to be 400 households considering the sample size taken during baseline as well as the resource allocated for this measurement.

#### Steps for Cluster Sampling

1. Define the geographical coverage: this might include primary focus area (PFA) in which WV is currently implementing.
2. Prepare the list of all Villages with total number of households and population with six column table.
  - # Kebele
  - Village/Gote
  - Number of households
  - Cumulative Sample
3. Calculate the sampling interval (SI). Sampling interval is the result we get by dividing of total number of households in the impact area/PFA/ by total number of clusters we need which is 40 in this case.

Sampling Interval = Total number of HH/ 40

4. A random number between 0 and SI were identified the first cluster, using random number table.
5. The sampling Interval were added to the random number identified in Step 4 to get the second cluster. Continue adding the SI on the results until you identify the last cluster that is 40th cluster.

### **Steps for Household Sampling**

1. List of household heads was prepared in the cluster selected.
2. Calculate the sampling interval (SI). Divide the total number of households in the cluster by sample size per cluster that is (10)
3. Take a random number between 0 and SI to identify or select the first household, using random number table,
4. Add the sampling Interval to the number you took on step 4 to identify the second house hold. Continue adding the SI on the results until you identify the last cluster that is 10th cluster

### **3.4 Data Collection**

Primary and secondary sources were used for data collection. The primary sources are data collected using both quantitative and qualitative methods. The quantitative approaches include the household survey, while qualitative information is collected in the form of a participatory impact assessment which

encompasses focus group discussions. Data from secondary sources includes relevant project documents obtained from Woreda offices ,WVE reports .Structure data collection sheet were prepared and concerned offices were requested.

#### **i. Household Survey Questionnaires**

The data collection instrument for household survey was developed prior to the start of field work and based upon prior WASH surveys. 12 enumerators were selected and trained on the questioner. The questions in the questionnaire are targeted to capture responses of beneficiaries, primarily women . Collection of water and water-related household labor is traditionally and still predominantly a role of women. The questionnaire specifically enquires information regarding access to water sources access and utilization of Sanitation facilities and hygiene practices pre and post project implementation.

#### **ii. Focus Group Discussions/FGD/**

Group discussions were held and participants of each respective visited WASH site explained details of the projects. Some of the important information collected from FGD assessment included community participation during from planning, construction to utilization, ownership, water management committee roles, operation and maintenance, and water management and sustainability

issues. Shortcomings of the interventions, possible ways for improvement, limitations in technical capability and issues related to operation and management were raised in all the group discussions. Women representation was emphasized as they experience the benefits and shortcomings of the projects on a daily basis.

### **iii. Data Supervision, Verification, and Timeline**

The implementation of fieldwork was supervised by me. Research activities were overseen and coordinated by an experienced Assistant researcher who was responsible to arrange field visits, arrange meetings with FGD, WVE staff and compile and cross-check completed Questionnaires for consistency and completeness.

### **3.5 Data Processing**

Data entry was done by CsPRO and SPSS were used to analyze the data. Reports from group discussion were disaggregated to formulate a list of issues for evaluation and these were summarized in the results and discussion part as well in conclusions and recommendations section. Finally, analyses were made for core performance indicators that help to compare attribution of the project interventions to improvement of livelihood.

### **3.6 Project Design and implementation**

The project design was tailored towards responding to the immediate water and sanitation needs of the communities in areas where WASH facilities were not in place. These projects include major components of rural water supply activities in terms of provision of potable water supply and the corresponding resources for implementation: finance, capacity building training and assistance in institution building for the WASH system management. The project design was done in partnership with community representatives and woreda water resource development office as stated by WVE staff. Thus, the project design is appropriate in terms of responding to the direct water supply needs of the people in these respective woredas and kebeles. The implementation of these projects increases the national WASH coverage targeted through the GTP which consequently contributes towards the MDG (Millennium Development Goal) in water and sanitation.

#### **3.6.1 Project Implementation**

The interview held with WVE staff revealed that prior to the launch of WASH projects, WVE enters a signed agreement outlining duties and responsibilities of all parties. For example, Woreda administration, woreda water development office and woreda finance and economy office and woreda health office sign MOU before the intervention. At the grass root level, community representatives at Kebele and village level directly participate in planning and implementation of

the project. The water management committee is the final structure regarding water supply.

### **How are water Supply schemes constructed?**

The implementation strategy primarily emphasized working with partners, especially with government offices and through Community involvement. At the same time national contractors and consultants were utilized which enhances division of labor, improves the quality of work through involvement of specialists in the sector, and ultimately, responds to the pressing need of the community to complete the project in a timely fashion. Accordingly the project activities were categorized based on their complexity and the level of investment cost.

### **Drilling of shallow wells**

Drilling of shallow wells were mostly handled by using WVE WASH department owned drilling machines with own manpower to operate those tools. This practice of drilling shallow wells by office owned drill machine is practiced to save cost of drilling .When the number of shallow well planned to be drilled are beyond WVE private drilling companies were invited to take part on the drilling through limited bid process. For example PANGEA drillers PLC and Aynakore Business PLC have took part in the drilling of shallow wells from FY 13-15.

### **Drilling of Hand dug wells , Springs development works**

In contrast to shallow wells, constructions of hand dug wells and spring development were awarded to the local contractors grade BC- 7 and below. This is done through selective bid approach to the least bidder. Hence WVE Jabitehanne ADP administer per contract rule. This is done to empower local contractors. WVE also train youth as artesian for two reasons one as source of income and diversifying income source.

### **Rope Pumps**

Rope pumps are small equipment installed on farmer level hand dug wells. This rope pumps enables the farmers to easily discharge water through manual operation instead of traditionally fetching deep by using bucket. This rope pump benefits individual farmers and their neighbor as source of potable water and for irrigating small gardening.

### **3.7 Limitation**

- The understanding and expectation of the respondents about the data collected has an impact on the quality of the data
- The experience and skill of the enumerators to keep the consistency of the information on the spot.

## 4. ANALYTICAL DESCRIPTION OF FINDINGS

### 4.1. Analysis of HH data collected

#### 4.1.1 Increase Potable water coverage

WVE Jabi tehnane ADP have constructed different water schemes to address the potable water need of the community. Selection of water supply scheme type was based on hydro-geological conditions of the area(Availability of fresh water) and the corresponding feasibility of each scheme in that specific area. Due to hydro geological nature mostly shallow wells were constructed and few hand dug well and spring development works were done. Rope Pumps were also installed on HH garden both for pure water supply and gardening through irrigation. Accordingly the ADP report WVE have constructed 56 shallow well, 28 hand dug wells, 6 spring development works and 75 rope pumps, . Totally 165 water schemes were constructed by WVE Jabi tehnane ADP. As this data shows WVE alone have contributed to the increment of water supply coverage by 13 % as shown in table 2 blow.

Table 2-Water Supply schemes constructed by WVE from FY 08-15

S/N	Type of Water Source	Planned FY 08-15	Achieved FY 08-15	# of Population benefited	Remark
1	Shallow well	44	56	16800	Availability of additional fund source and drilling by WVE enable to drill more wells than planned.
2	Hand dug well	25	28	8400	Availability of additional fund.
3	Spring development	8	6	600	Lack of potential water source for spring development.
4	Rope Pump	75	75	750	
	Total	152	165	26,550	

Source : WVE Jabi Tehnane ADP 2015 Terminal Report

Table 3 –Water Sources in the dry and Wet season

S/N	Water Sources	Dry Season		Wet season	
		Freq	%	Freq	%
1	Piped in to dwelling	10	2.5	9	2.3
2	Piped into yard/plot	23	5.8	21	5.3
3	Public water	17	4.3	16	4
4	Open well in dwelling/yard/plot	17	4.3	17	4.3
5	Protected well nearby dwelling	48	12	47	11.8
6	Protected public well	118	29.5	122	30.5
7	Spring/river/stream	165	41.3	166	41.5
8	Pond/Lake/dam	2	0.5	2	0.5
	Total	400	100	400	100

Source :Jabi tehane Woreda HH Survey 2016

The baseline value of the on potable water coverage in 2008 were 51.6 % , According to the current evaluation survey 54 % of the HH have potable water access as shown on table 3 above Which show 3.4 % increment. In the same manner secondary data of the woreda Water resource development office show 66.3% coverage. This show 24.3 % difference when compared from the base line data of Central statics agency on 2007( before WV intervention) which is 42%.

As shown above the evaluation survey and the secondary data have different figures ( 54 % and 66.3 % respectively ) .The reason why is the existing water institution and distribution do not match with the current population. In addition there are unfunctional water schemes but are considered as functional when calculating water coverage by the government. In addition the water coverage is not updated to the current population growth. There is no uniform distribution of water supply schemes in all villages for many reasons. The main are in availability of water/geological/, inaccessibility of roads for drilling machines and the failure of schemes easily due to soil formation and dry weather. This is key assignment for the government and the NGO working on this regard. This show the government and other NGOs works for equal distribution of well .

The discussion with FGD members have depict many issues beyond this .Even though there are safe water supplying schemes in there vicinity they are not sufficient compared to the population. As a result the women still visit unprotected water sources /rivers, ponds and springs /to get additional water for domestic utilization, sanitation and hygiene. This still contributed for water borne disease and work burden on women. for in some places e.g Endala Water Schemes Water committees allow only 40 Lit water for the HH per day which is far below the Standard 20Lit/day/person. This is because the water is the water is not sufficient. Even it takes long time to get this water.

To increase potable water supply the local government and the other stakeholders have also built water institutions .As a result as you see in the table below a total of 1153 water facilities are available in the woreda of which 1107 are functional. These have raised the potable water coverage to 65 % in rural and 80 % urban areas.



**Figure 2 Shalowell built in Hodansh kebele**

**Table 4 Jabi tehnane Woreda Potable water supply, 2015/6**

Location	Total population number	Total Number of Water facilities	Total Number of functional water facilities	Total number of functional Water committee who collect water tariff	Participation of Women in Water committee %	#People access for safe water	% coverage
Rural	184198	1153	1107	0	25%	119729	65%
Urban	18439	2	2	2	25%	14751	80%
Total	202,637	1155	1109	2		134480	66.36%

Source ,Jabi tehnane Woreda Water development office,2016

## **Functionality**

According to secondary data from woreda water office table 4 above the number of un functional water sources are found to be 46 out of 1155 i.e 3.98 % . This data refer for those completely broken and dried wells. There are many wells which frequently broken down due to many users per site .The FGD participants have explained the reason. The main reason is drying of wells, and frequent break up of spare parts and shortage of new spare parts. The frequent malfunction is associated with high number of user per well, in appropriate utilization, and high depth contributed for failure. The drying of wells is associated with deceasing trend of water table due to poor water conservation works, deforestation and flood.

The drilling of wells in rainy season have contributed for misleading depth of drilling as Key informants said. Rarely wrong site selection has contributed also for water drying. They have recommend any water works be done in dry season with high care of site selection by professional geologists .One of the FGD participant remembers the case in there village in Zaba Kebele where one well dried upon drilling. This is because wrong site selection, this have financial loss to the community and WVE a lot.

## **Access through Season**

Regarding time taken to fetch water as shown on table 6, below 74.7 % of the community gets potable water within 30 minutes radius which is similar with wet

season 74 %.This implies season have no significant impact on accessing the potable water sources.

Table 6 Time taken to fetch Water during the Dry and Wet season,

SN	Time taken	Wet season		Dry Season	
		Frequency	%	Frequency	%
1	0 -30 Minutes	296	74.0	299	74.7
2	30-60 Minutes	69	17.3	68	17.0
3	More than 60 minutes	35	8.8	33	8.3
4	Total	400	100.0	400	100.0

Source: Jabi Tehnane HH survey data 2016

### **Major problems in potable water supply**

.Almost all users consulted believe that the water they use is clean and tasty, incidences of water borne disease and time needed for collecting water reduced. The findings show a much more improvement than the baseline. 30.6 % of respondents say distance is key barriers. However, as there are so many users per water point. Water is collected in shifts and it may also entail increased waiting time. Due to frequent break down they also visit unprotected water sources as 11.6% of respondents. Too many users per each water point is the

main concern of 59.1% respondents. This also causes frequent breakdowns and might reduce sustainability.

Table 7. Major Problem in water supply

S/N	Problems	Frequency
1	Distance/ >30 minutes/	19.3
2	Too many users at one site	34.9
3	Frequent malfunction	10.22
4	Shortage of water	12.5
5	In accessible site selection	23.86

#### **4.1.2 Improve Environmental Sanitation Practices of the Community,**

The second project outcome is Improve environmental sanitation practices of the community. The ADP have promoted Community led total sanitation and hygiene program. This program aims at creating awareness on the committee towards avoiding culture of open defecation and practicing toilet for defecation and keep environmental sanitation. WVE Jabi Tehnane ADP have implemented Community led total sanitation /CLTS/ model in each village. CLTS focused on mental /attitude change on the community towards sanitation and hygiene. This encompasses building Household level toilet with hand washing facilities, waste disposal pits, and washing hands at critical times.

Accordingly to HH survey shown on table 7 below ,88.5% of the community have latrine at individual home. Those HHs with latrine were 50 % according to CSA data in 2007.This show 38.5% increment on latrine coverage. The secondary data on number of HH with latrine show that 81.4 % (80 % rural and 90 % urban dwellers) have pit latrine. The secondary data and the evaluation finding have 7.1% variation on latrine coverage. This may be due to wrong data given by respondents due fear of consequence for not having latrine.

**Table 8 Human waste disposal**

S/N	Disposal Ways	Frequency	Percent	Cumulative Percent
1	Open field	46	11.5	11.5
2	Toilet	354	88.5	100
	Total	400	100	

Source: HH survey Jabi Tehnane ADP 2016

Even though the HH with toilet facilities are 88.5 % all of them do not have same quality of toilet facilities as shown on table 8. The standard toilet is expected to be with Slab and with proper super structure. The study show that only 1% of the HH have such feature the majority having traditional pit latrine with mud slab with no proper structure. This account for 58.5 % whiles the rest 40.5 traditional pit latrine with mud slab. There was no single VIP in the household as the area is dominantly rural nature with low water supply to utilize VIP latrine system

**Table 9 Type of Toilet facilities**

S/N	Type of Toilet facilities	Freq	Percent	Cumulative Percent
1	Hygienic pit toilet with slab and proper super structure	4	1.0	1.1
2	Traditional pit latrine with mad slab	162	40.5	33.9
3	Traditional pit latrine with mud slab not with proper structure	234	58.5	100.0
4	VIP latrine	0	0	0
	Total	400	100.0	

**Source :** HH Survey Jabi tehnane Woreda 2016

### **Latrine Utilization rate**

Toilet availability and the utilization rate is somewhat different due to low awareness. As table 10 shows 55% of rural and 70 urban dwellers utilize their toilet properly but the evaluation survey ( table 8 ) latrine coverage is 88 % . This shows still there exist behavioral works remained to be done.

FGD discussion on sanitation facilities have depicted as fallows. The implementation of community lead total sanitation program is very good. It promoted every HH have their own pit and use there. It also improved hygiene practice. But the implementation process have some political force .Due to this some reluctant HH who did not have attitude change towards open defecation

built poorly constructed pit with poor depth & super structure for the sake of counting. This HH also open defecate. The utilization rate and the total latrine coverage do not match as a result. Hence NGOs and government should work more on attitudinal change than enforcement for the sake of campaign works which bring wrong figures. Participants mentioned WVE focus on attitudinal changes by letting them hate open defecation and the associated health problem.

### **Community led total Sanitation Model/CLTS/**

The secondary data on table 10 show, it was possible to implement CLTS and declare 35 kebele open defecation free. The remaining 5 kebele are under implementation of the model. This were done in collaboration with woreda health office.

**Table 10 Jabi tehane woreda Sanitation coverage.**

Location	Total Number of Kebele	Total Number of ODF Certified Kebeles	Total Number of HHs	Number of HHs with pit latrine	% of Latrine coverage	Number of HHs with hand washing facility	No of HH with improved latrine	% of coverage of latrine utilization
Rural	37	33	45827	36661	80%	589	5	55%
Urban	2	2	7927	7134	90%	110	65	70%
Total	39	35	53754	43795	81.47%	699	70	

Source .Jabi Tehnane Woreda health office 2016

## Domestic Waste disposal

Like human waste, domestic wastes also mostly got disposed in open field. The evaluation survey on Table 11 below depicts that 50% of the community used to dispose their domestic waste in open field. Only 45% use open refuse pit to dispose domestic waste. Rarely 2.25 % of the community use closed refuse pit and 2.3% of them burn in open field. Those using open pit also have double purpose for composting. When compared to 2008 baseline those HH who throw away domestic waste in open field were 80.8 % which is reduced to 50 % while those using open refuse pit have grown from 14.3 to 45 %.

**Table 11 : Sanitary facility usage for domestic waste disposal**

	Frequency	Percent	Cumulative
Open field	200	50	50
Open refuse pit	180	45	95 %
Closed refuse pit	9	2.25	97.25%
Burn in open field	11	2.75	100%
Total	400	100.0	

Source :HH Survey Jabi tehane Woreda 2016

## **Institutional WASH**

### **WASH facilities in schools**

Sanitation facilities are equally important in institutions likewise at home. This part is not given attention as it was done at community level. All schools except few have poorly constructed latrine which is not proportional to students. As you see on the table 12 below only 1 primary school out of 44 have sex segregated latrine while out of 44 primary second cycle schools only 7 have sex segregated latrine. Due to in availability of sex segregated latrine girls are not comfortable to utilize latrine especially during menstruation time. This has its own contribution for school dropout even though it is not the objective of the research.

WVE in this regard have built 11 sex segregated VIP latrines in 11 Schools. This have benefited more than 12,000 Students as per WVE Jabi ADP 2016 report.

In availability of water in schools is one of the limiting factors for sanitation and hygiene in schools. To keep class room and latrine sanitation water is quite essential. The data form education office revealed that 13 primary schools out of 44 and 30 out of 44 second primary schools have safe water supply in the school or in their close vicinity.



Figure 3 VIP Latrine in Genet primary school



Figure 4 Children drinking water, Shallow well-constructed in Goref Primary school

Table 12 Number of schools Vs WASH facilities 2015/6

S/N	Particulars	Primary First cycle (grade 1-4)	Primary second cycle (grade 5-8)	Senior secondary cycle (grade 9-10)	Preparatory (grade 11-12)
1	Number of Schools	41	44	2	2
2	Number of female students	15374	7180	1579	555
3	Number of male students	16337	7258	1542	560
4	Total number of students	31711	14438	3121	1115
5	No of VIP latrine in schools	41	44	2	2
6	Total number of seat for the existing VIP latrines	49	44	4	4
7	School with sex segregated latrine	1	11	1	1
8	Schools with MHM physical access ( Separate Room)	0	0	0	0
9	Schools with safe water supply	13	30	2	2

Source :Jabi tehnane Wereda education Office report 2016

### **WASH facilities Health institution**

As you see above on table 13 the secondary data form Wereda health office shows only 3 health centers out of 11 have VIP latrine. Those mothers who delivered in health institution are still in critical problem for their sanitation & hygiene. From 39 Health Posts only 3 have ventilated improved pit. This health centers are owned by the government but they are not still model teaching

center for the community on this regard. The reason mentioned for not having proper VIP latrine is budget constraint according to woreda health office.

WVE have built 3 sex segregated VIP latrine in health Posts and 1 in Health center. In addition For improving Public sanitation WVE have built 1 multipurpose public toilet in market place with the especial feature of having shower rooms and accommodate people with disability. In addition WVE drilled 1 shalow well for 1 health center ( Source WVE Jabi tehnane ADP report).



Figure 5 VIP latrine in Mankusa Health center

Table 13, WASH Facilities in health intuitions in the Woreda, 2015/6

Type of health institutions	Number (total)	No of Health institutions With proper VIP latrine	No of health institutions with proper hand washing facility	No. of health institutions with safe water access
Woreda Hospital	0	0	0	0
Health Center	11	3	3	3
Health Post	39	3	0	0

Soucre :Jabi tehnane Woreda health office,2016

### 4.1.3 Improve Hygiene Practice

#### *Hand Washing Practice*

It is expected that there are critical times each individual especially women need to wash their hands.This are after toilet, before food preparation, ,before and after feeding ,after washing children and before feeding them. The finding in table 14 indicate that 99 % women have practice of washing hands before eating food,81% after toilet or disposing wastes,95% after eating food and 81 % early in the morning .

**Table 14 .Hand washing practice at critical times**

	Critical Events	Hand Washing Practice		Total	Percent
		Yes	NO		
1	Early Moring	324	76	400	81.0
2	After Toilet or disposing waste	324	76	400	81.0
3	Before eating food	398	2	400	99.5
4	After eating food	382	18	400	95.5
5	After Washing children	98	302	400	24.5
6	Before feeding children	123	277	400	30.8
	Total	1649	751	2400	68.7

Source: HH survey Jabi tehnane Woreda 2016

During hand washing time it is expected to use soap or other ingredients like ash or locally available materials instead of washing on plain water only. The survey finding on table 15 showed that 57.3 % of respondents wash hands with soap. The rest 42.8% uses plain water for washing .This is mainly because of lack of knowledge/awareness .This will not necessarily related to economic problem because instead of Soap they can use Ash for washing. My field observation revel that even though hand washing facilities are available I found them empty water, this show nobody use them for washing. Hence more works are expected to be done on behavioral changes.

Table 15 Material used to Wash Hands

Materials used	Frequency	Percent	Cumulative
Plain water	171	42.8	42.8
Soap	228	57.0	99.8
Ash	1	0.2	100
Total	400	100.0	100.0

Source: *Jabi tehnane woreda HH survey 2016*

### **Washing Water tankers**

Washing water tanker is equally important as getting pure water. It is recommended at least to Wash weekly or before that. The study on table 16 has found out that all HH wash their water tanker every week. This is because there is culture of washing water tanker every week end which is related to religious did. AS the FGD members stated On Sunday it is not allowed to collected water by their religious practice, hence on Saturdays every women wash their Tanker and collect the water. Traditionally they use tree leaves to wash their pot/tanker. If the tanker is clay pot they usually fumigate it with natural aroma smoke.

**Table 16: Frequency of washing Water Tanker**

S/N	Frequency of washing Water Tanker	Frequency	Cumulative
1	Daily	0	0
2	Weekly	400	100%
3	Monthly	0	
4	not at all	0	

Source :HH Survey Jabi tehnane Woreda 2016

### **Personal hygiene**

The evaluation survey in table 17 found out that 53.75 % of respondents wash their body weekly while 38.5 % of them wash bi weekly. Some 7.75 % wash their body monthly. Their seem much have to be done on this regard. On the FGD discussion women said they use river water for washing their body as the potable water is insufficient for them .This in turn have caused problem for their body/skin health. As you saw on the below table 19 among the top 10 disease of the woreda skin disease ranked 8<sup>th</sup> contributing for 5.6 % of clinical record.

Table 17 Frequency of washing Body

S/n	Frequency of washing Body	Freq	%	Cumulative
1	Weekly	215	53.75	53.75
2	bi weekly	154	38.5	92.25
3	Monthly	31	7.75	100
4	not wash	0	0	

Source: HH Survey Jabi tehane wereda 2016

### Disease Associated Water, sanitation and Hygiene

On the evaluation survey those children who faced diarrhea within two weeks are found to be 29.5% . This figure has shown slight decrement from the baseline value in 2008 that was 32 % prevalence. This may be either from shortage of potable water or poor sanitation and hygiene practices

**Table 18 . children diarrhea cases in the last 2 weeks**

	Response	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	59	13.9	29.5	29.5
	No	140	33.0	70.0	99.5
	I Do not Know	1	0.2	0.5	100.0
	Total	200	47.2	100.0	

Source: Jabi tehane Woreda HH survey 2016

The secondary data of woreda health office clinical data in health institution depict helminthes & diarrhea cases ranked 5th and 7<sup>th</sup> from the list of top 10 diseases as you may see on Table 19 below .

**Table 19** Top ten disease in the woreda(clinical data) in 2016

S/N	2015/16	# of cases	%
1	Acute upper respiratory tract infection	19693	22.2
2	Acute febrile illness	14572	16.3
3	Pneumonia	12419	13.89
4	Malaria p. falciparum	11333	12.6
5	Helminthes	7087	7.9
6	Malaria confirmed	6344	7
7	Diarrheal	5335	5.9
8	Skin infections	5020	5.6
9	Trachoma	3847	4.3
10	Other unspecified	3784	4.2

Source ;Jabi tehnae Woreda Health office report 2016

#### **4.1.4 Increase community capacity to manage water supply schemes.**

##### **Capacity building**

For each water scheme that will be built by WVE corresponding water management committee that consist of 7 members/5men and 2 Women/ are

formed. These members are trained on scheme maintenance and community management of wells.

As per my discussion with WVE staff and Woreda government Water resource office capacity building of water management committee and the wider community is done in partnership with local government office and WVE staff. Appropriate place for the training, meeting and demonstration is selected in consultation with the community. WVE pays per diem for the community if they come far distance to the woreda center to attend workshops. Per diem is not paid for those training conducted at their vicinity

### **Annual Plan Orientation and site selection**

The Annual plan regarding WASH activities is discussed primary with Woreda level stake holders .Then key Kebeles are identified for implementation based on the level of severity, presence of other NGO and government WASH plan in the Kebeles.After the KAs are identified by the WVE and Stakeholders, the specific site selection and feasibility study is done by the geologists to determine the availability of water and to which scheme it is compatible. At this stage the community leaders are consulted if the site selected is comfortable all year round . Source WVE Staff discussion )

After gaining this consensus and if site is selected by the geologist WVE Jabi tehnane ADP communicate the kebele administration to gather the whole

potential water user and to nominate management committee that have 7 members/ 5 men and 2 women/ .Before the construction of the water scheme this committee is trained on water management techniques, minor operation and maintenance, water utilization and expected community participation. In turn this committee trains the whole water users. These committees serves as bridge between the community, WVE and government.

As per the FGD discussion all the water schemes built by WV have water management committes.As a result the sustainability of the schemes were ensured, because the committee can do maintenance ,fence and protect from harm, theft, and in case of major repair they buy spare parts and repair it.

The committee members ensure community contribution before and after construction of the scheme. Before the construction they mobilize the wide community to participate on material collection e.g stone, sand, wood. During the construction depending on the nature of the scheme they participate on labor by excavation, digging and loading and unloading of construction materials. After the completion of the scheme the community contribute cash regularly /annual or bi annual /for maintenance and guard recruitment.

In all the water schemes visited the community participated through labor, supplying local materials at location of use, opening access roads, loading and

unloading of construction materials and fencing of the water schemes. Due to the project nature WVE work closely with wereda government water office for implementation of water supply projects. The selection of type of water scheme design is determined by the geologies.

As FGD participants in Hodansh KA, there are water schemes not functional in their village, due to drying of the well after 3 years' service. This is due to the short rain fall in summer. The Other FGD participant from Zaba tSION Kebele told me that drilling of shallow well in rainy season contributed for early dry up of well in their KA. The shallow well serves till April then dries, then recharged when the rainy season commence. Some Other respondents said Quality of Pumps installed is weak that can easily be broken.

I have observed that Some hand dug wells in Hodansh and Mircha Kebels have dried up to climate change as the areas water table goes deep. Previously water logged areas are now becoming dry. This have critically affected springs and hand dug wells. As WVE Jabi tehnane ADP manager (Mesfin Seifu ) statement this days WVE stopped hand dug wells for this reason and focused to Shall wells.

### **3.2 Project Effectiveness, efficiency and relevance**

#### **Effectiveness**

**Improved access to safe water:** WV has supported the construction of 165 different water infrastructure and currently 12 water projects are under construction. The constructed infrastructure will provide access to 26,500 persons or about 13% of the Woreda population. This has contributed for increasing access to potable water supply from 51% to 54% in the current year. Reduced travelled time is another major benefit of the water construction. All water points are fenced and properly protected by community members and a water committee manages the daily distribution. Limitations observed include, there are so many users per water point increasing waiting time and causes frequent breakdowns.

**Improve community sanitation:** Improvements are also witnessed on using toilets and waste disposal systems , 88.5% HHs use proper human waste disposal system, 81% wash hands after using toilets, and 50% use proper solid waste disposal system.

### **Project relevance**

Participation of stakeholders : The program was initially designed through the participation of stakeholders. Partners participated during implementation process fully. During this process they were able to adjust plans to needs, selecting sites, monitoring implementation, quarterly review meetings, supervising quality, and mobilizing community.

## **Project Efficiency**

The project efficacy was measured on budget utilization .The ADP have utilized 112 % of planned budget for the 8 years. The main reason for over spending is availability of slight fund from the donors and budget shift from other projects prioritizing the WASH need. As we can see the ADP have efficiently utilized planned budget.

**Table.20 Project budget utilization**

Project Name	Phase	Planned Budget	Utilized Budget	%
WASH	Phase 1/2008-2012/	378,121	401,516	106
WASH	Phase 2/2013-2015/	396,814	480,190	121
	Sum of 2 Phases	774,935	881,706	113.

Source. WVE Jabi tehnane ADP Report 2015

## **Cost per Beneficiaries**

From the able below it is possible to see cost per beneficiaries is \$12.45 which is good. The cost per benefices increased in the second phase due to the reason of inflation per the ADP report.

**Table 21 Cost per benefices**

Project	Phase	Beneficiaries	Budget	Cost per beneficiary (US \$)
WASH	Phase 1/2008-2012/	42128	443172	10.5
WASH	Phase 2/2013-2015/	32035	480190	14.5
	Total	74163	923362	12.45

Source.WVE Jabi tehnane ADP Report 2015

## 5. CHALLENGES AND LESSON LEARNT

### 5.1 Challenges

**Large number of water users per site:** the large number of users per site has increased frequency of breakdowns and water needs for sanitation and personal hygiene. This is a challenge for sustaining the service and requires a new approach to solve water problems. This approach needs community wide planning than project specific planning for the development of water resources for all purpose- drinking, sanitation, livestock and agricultural use.

**Natural resource degradation;**-This have led the shalowells and hand dug wells dried up in dry season due to low underground water recharge. This has created un sustainable water supply. These days hand dug wells are not recommended for this reason. Natural resource conservation should go hand in hand with potable water supply.

**Inflation-** the unexpected inflation of construction materials have limited the number of water schemes which are intended to be constructed.

**Lack of potential shallow well driller company;-** .Due to this WVE was in capable of drilling at appropriate time and deliver to the community .Due to this some the shallow well were constructed on rainy season which impacted quality and sustainability.

Lack of experienced geologists.- Wrong site selection and determining the depth of shallow well and hand dug well are clearly associated with low skill of geologists. Beyond this in availability of these experts is minimal at time of need.

**Partner's tight schedule:** - woreda water office government employees for supporting the project was challenged due to multiple assignments from government and associated minimal staffing.

**In accessibility of roads** -As many of the KAs are far located from the main road it is not accessible to mobilize heavy drilling machines. These have impacted fair distribution of water schemes in all villages.

**Low community readiness latrine construction.**

It was difficult to break culture of open defecation easily. Hence the community were resistant to construct own latrine.As a result some of them constructed poorly and the latrine utilization was minimal at the beginning.

## **5.2 lesson Learnt**

- It is possible to mobilize the community easily for water supply scheme construction. The community is found ready to participate in Kind, cash and labor. Any development practitioner who intends to improve the potable water coverage of the area can easily engage the community.
- Shallow wells are drying up and failed easily due to high number of user per site. Hence population data based drilling/planning have to be done before construction
- Experienced geologist should be consulted during feasibility study to avoid wrong sit selection and to determine the depth of the well.

- Natural resource conservation works around water schemes should go hand in hand with water scheme construction. This will improve water recharge capacity.
- Hand dug wells dried up easily than shallow wells. This is because the water table is going deep. Natural resource degradation and global climate change have contributed for this.. Hence WVE should focus on shallow well than hand dug well.
- The mismatch between intended water user and the well capacity have contributed for early dry up of hand dug well and shallow wells.
- For those villages having dense population motorized deep well technology have to be adopted to solve the severe water problem of the area, so that water can be distributed at water points in their respective villages.
- Sanitation and hygiene practice required behavioral change .Hence the approach of CLTS implementation should be based on attitude change than obligation by the politician. This is because even though latrine pit are available at individual home there are HH which still open defecate. The quality and depth of the pit is associated with this.
- It is found encouraging that WVE gave attention for institutional water supply .This have contributed for improving school learning environment .children can settle in school instead of searching drinking water amid the learning period. In addition it enhanced sanitation and reduced contagious disease.

## 6. CONCLUSION AND RECOMMENDATIONS

### 6.1 Conclusion

- WVE WASH project has improved access to potable water supply: as a result of 26,500 population i.e 13% of the Woreda population got access to potable water supply due to WVE intervention . Diarrhea cases reduced slightly. In addition water borne diseases are not among the leading top disease of the community.
- Sanitation coverage rose to 88.5% due to implementation of community led total sanitation hygiene campaign .This show WVE together with stakeholders have worked alot towards reducing open defecation and constructing individual latrine significantly. As a result each household constructed own latrine on various degree of standards or quality.
- Hygiene practice among the community improved. About 57.3 % of the community use soap or ash to wash hands. This still need more works on behavioral changes.
- The community actively participates during water scheme planning, construction and utilization management. This has high contribution for the sustainability through creating ownership.
- All water schemes constructed by world vision have water management committee. All this committee has received training on water scheme management, minor maintenance and financial management skills. This

have contributed community ownership, for the sustainability and management and conflict resolution among users.

- Women membership in water management committee contributes a lot as women say is addressed. From seven members two are women.
- The challenges faced during project implementation are solved through integration with stakeholders. As a result WVE have achieved the target and utilized planned budget successfully.
- Institutional WASH is given attention equality as done at community level. Especially WVE have done a lot in School led total sanitation. WVE in this regard have built 11 sex segregated VIP latrines in 11 Schools. This have benefited more than 12,000 Students as per WVE Jabi ADP 2016 report. With regard to WASH facilities in health institution WVE have built 3 sex segregated VIP latrine in health Posts and 1 in Health center. In addition WVE drilled 1 shallow well for 1 health center. In addition For improving Public sanitation WVE have built 1 multipurpose public toilet in market place with the especial feature of having shower rooms and accommodate people with disability

## 6.2 Recommendations

- To create value for water , it important to develop a realistic transition from free provision of water to a reasonable water fee which will be collected during collection .This will in another way will be capacity to develop more water sources instead of waiting support from government and other NGOs.
- Shallow well drilling should be done on dry season. In summer the water table increase and misleads the drilling to end up in short depth.This need proper planning and budgeting before the fiscal year.
- In Kebeles like Mankusa Abdegoma where dense population settlement exist it is cost effective to construct deep well instead of shallow wells. There are about 7 shallow well in few meters distance due to dense population. The cost of this shallow well can dig up deep well and address much better population.
- The natural resource degradation has led the shallow wells and hand dug wells dried up in dry season due to low underground water recharge. This have created unsustainable water supply. Hence natural resource conservation should go hand in hand with potable water supply.
- Functionality of water schemes is found to be 96 % according to Woreda water office.This need improvement be considering the various factors mention in the recommendation part above.

- There are no IEC materials developed and distributed in the community for teaching on Sanitation and Hygiene. In WVE program only training is given on meeting and home to home through health extension workers.
- Address waste water and solid waste management concurrently with improving access to sanitation facilities. Now major attention was given for latrine construction.
- Improving latrine utilization is as important as improving coverage. While the percentage of Households having latrines always seems to be a point of interest for implementers, Government or NGOs, There are HH defecate open filed even though they have latrine due to shallow understating of latrine usage.
- School sanitation promotion should be strengthened. Since many students use a single pit it may escalate sanitation related health problem from school to home.
- Ensure those Water management committees are well equipped with the required capacity right at the beginning of the operation and devise a mechanism to refresh these committees is important. The training days should match with expected output.This committee are supposed to undertake minor maintenance, in practice they are not doing it due to low skill and material shortage.
- Conflict resolution should be included in projects where necessary before

Implementation. The need to understand all possible sources of conflict resulting from the use of water source in one community to supply another neighboring community is a decisive factor that affects the sustainability of a scheme.

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## Annex 1.

### Part A. Interview Questions

#### Interview Questions for Evaluation The Impact Of World Vision Ethiopia Water ,Sanitation And Hygiene Project On The Community

##### Introduction

This research aims at evaluation the performance of WASH project implemented by World vision Ethiopia Jabi tehnane Area Program in Your kebele for the partial fulfillment of my Thesis This research will bring about improvement for future performance of the project. Hence your feedback on this research is very significant. First of all I appreciate for giving your tight time for this research. Hence I kindly request your to give me 15 Min for this interview.

##### Section 1 Identification

I. Name District Jabi tehnane

II. Name of Kebele   -   village  

III. Date of interview (date:month:year)  

VI. Name of Interviewer  

VI. Name of supervisor  

V. HH Number  

##### HH profile

- 1 Sex
- |                          |        |
|--------------------------|--------|
| <input type="checkbox"/> | Male   |
| <input type="checkbox"/> | Female |

- 2 Age in years

1	18-30
2	30-45
3	45-60
4	>60

3 Marital Status.....

1	Married
2	Divorced
3	Single
4	Widow

4 Education level

1	Illiterate
2	Literate/basic reading writing skill
3	Elementary complete
4	High school
5	Technique or university

5 Family Size

1	1-4 members
2	4-6 members
3	7-8 members
4	9-12 members

6 Occupation

1	Farmers
2	Merchant
3	daily laborer
4	Skilled occupation/carpenter, potter, weaver,
5	Other

7 Housing type

1	Own house
2	Rental house
3	Mutual/live with relative

## Section 2 Water Supply

8 what is the major source of water in dry season? ( Tick one)

1	Tap Inside the House
2	Tap In the compound private
3	Taped water outside the compound shared
4	Protected public water Well and spring
5	Open well inside compound
6	un protected public water well ,and Spring
7	Unprotected pond : lake, and dam
8	Others/ river, flood

9 What is the major source of water in dry season? ( Tick one)

1	.Tap Inside the House
2	Tap In the compound private
3	Taped water outside the compound shared
4	Protected public water Well and spring
5	Open well inside compound
6	un protected public water well ,and Spring
7	Unprotected pond : lake, and dam
8	Others/river ,flood

10 Distance of water source in dry season

1	0-30 minutes from residence
2	0 - 60 Minutes from residence
3	above 60 minutes from residence
4	Water pipe up to home
5	. do not know

11 Distance of water source in wet season

1	0-30 minutes from residence
2	0 - 60 Minutes from residence
3	above 60 minutes from residence
4	Water pipe upto home
5	do not know

12 Was the water sufficient to meet all your household needs? ( Dry Season)

1	Yes it was
2	Not sufficient and hence used other water types
3	Since it was not sufficient we use the water only for drinking
4	Was excess and used for livestock and for vegetables

13 Was the water sufficient to meet all your household needs? ( Wet Season)

1	Yes it was
2	Not sufficient and hence used other water types
3	Since it was not sufficient we use the water only for drinking
4	Was excess and used for livestock and for vegetables

14 Is there any new water infrastructure constructed in the

1	Yes
2	NO

15 If yes who support the construction?

	1. Government alone
	2. World Vision alone
	3. Governmnet with the community
	4. WVE with the community
	5. Do not know

16 Who maintain water schemes upon failure?

1	1. Water committee
2	2. Governmnet office

3	3.NGO
4	4.Community

17 What are the problems you face in potable water supply?

1	Distance/.>30 minutes/
2	too many users at one site
3	frequent malfunction
4	Shortage of water
5	Inaccessible site selection

18 what do you think is the main reason for failure of water schemes frequently ?

More than one answer is possible.

1	Lack of Appropriate utilization/operation skill
2	lack of ownership by the community
3	because children usually fetch water
4	Poor Quality of the Pump
5	lack of fencing
6	Theft of Pump spares

19 What do you think is the immediate impact of water schemes constructed in your vicinity?

1	Save time and energy
2	Get Pure water and health improved
3	Send my children to school easily
4	.Have time for caring my children
5	Hygiene and sanitation improved

20 What is your contribution during water scheme construction?

1	Contribute Cash
2	Contribute Labor
3	Construction material sand, stone ,contribution contribute labor
4	4.All

21 Do you treat water at home for impure water?

1	Yes
---	-----

2	No
---	----

If yes for # 21 what methods you practice to purify the water?

1	Boiling
2	Chlorination
3	use of tablet or Wuha agar
4	Settle sediments on the container
5	Filter by Clothes
6	Other
7	Not Apply

22 How often You wash your Water container/tanker

1	Daily
2	Weekly
3	Monthly
4	Not at all

### Section 3 Environmental and personal hygiene

23 Which type of sanitation methods do you often use to defecate?

1	. Private Dry Pit
2	communal dry Pit
3	Open Filed

24 Is it wrong to defecate on open field by the community?

1	Yes
2	Not
3	I am not Sure

25 Do you have Solid waste Disposal Pit?

1	I have
2	Don't have

26 If Yes to # 25 Where do you dispose solid and liquid waste?

1	. Open Well
2	Compost
3	Burn

27 When do you think you have to wash your hand?  
( More than one answer is possible )

1	After washing my children
2	After using toilets
3	3.After disposing waste
4	4.before Food
5	After Food
6	Before preparing food to children
7	before feeding children
8	After farm activities/cleaning livestock home
9	Other

28 What do you use to wash your close?

1	Soap
2	Ash
3	Leaves
4	Only Water
5	Other

29 How often Do you use soap /ash to wash hand ?

1	Always/ mostly
2	Sometimes
3	Never used

30 How often do you wash your body??

1	Once a week
2	Twice a week
3	Monthly
4	Not know

31 In the last two weeks, has there been a child among the Family who were sick of Diarrhea?

1	Yes
2	No
3	Donot Know

## Annex 2

### Part B .FGD Questioner

#### Section 2: Identification and Planning

##### FGD for WASHCO

##### Introduction

##### Section 1: Respondents' identification

Name of Woreda .....

Name of Village/Got .....

Name of Water Supply Scheme .....

Names of present members of WASHCO.....

List of their respective positions in the WASHCO. ....

Date of FGD.....

1. What was the process involved in community mobilization and awareness creation on the use of the new schemes, and how would you evaluate these process? Why?

2. How was the WASHCO formed?

a. What type of community meetings were conducted at the formation phase?

b. How were members selected?

c. Number of women in WASHCO?

d. Organizational structure of WASHCO?

3. How would you describe the need among the community to participate in the projects? Why?

4. What kind of training did the WASHCO receive from Woreda in the planning stage?

a. Type and effectiveness of training as it is evaluated by the WASHCO?

b. Duration of training?

c. Areas requiring more training

5. What kind of assistance did the WASHCO get while preparing

a. Facility Management Plan/WMP?

b. CMP application proposal?

6 Who is responsible for the management of the source e.g. cleaning and repairs in-case of any breakdown?

7. Are there any stoppages in water supply? If yes, list frequency and duration of stoppages, and whether stoppages are complete or partial

8. What proportion of these people are currently using the facility? Why?

9. Is water from the facility sufficient for the community? If no, what do you think the reason is? And what alternatives are used?

10. Is there associated capacity building training for WASHCO and the water user regarding sanitation and hygiene.

### Annex 3.

#### Part C. Secondary data collection format

Table 1, Number of schools Vs WASH facilities 2015/6

S/n	Particulars	Primary First cycle (grade 1-4)	Primary second cycle (grade 5-8)	Senior secondary cycle (grade 9-10)	Preparatory (grade 11-12)
1	Number of Schools				
2	Number of female students				
3	Number of male students				
4	Total number of students				
5	No of VIP latrine in schools				
6	Total number of seat for the existing VIP latrines				
7	School with sex segregated latrine				
8	Schools with MHM physical access ( Separate Room)				
9	Schools with safe water supply				

Table 2 .Projected population number 2015/6

Location	Total population		Children under 2		Children under 5		Mother s
	F	M	F	M	F	M	F
Rural							
Urban							
Total							

Table 3. WASH Facilities in health intuitions in the Woreda, 2015/6

S/N	Type of health institutions	Number (total)	No of Health institutions With proper VIP latrine	No of health institutions with proper hand washing facility	No. of health institutions with safe water access
1	Woreda Hospital				
2	Health Center				
3	Health Post				

**Table 4. Table Top ten disease in the woreda (clinical data) in 2016**

S/N	List of disease	Of cases	Of cases
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

*Table 5 Jabi tehnane Woreda WASH Data, 2015/6*

Location	Total population number	Total Number of Water facilities	Total Number of functional water facilities	Total number of functional Water committee who collect water tariff	Participation of Women in Water committee %	#People access for safe water	% coverage
Rural							
Urban							
Total							



# Annex4. Proposal

**PROFORMA FOR SUBMISSION OF M.A. (RD) PROPOSAL FOR APPROVAL WRITING**

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Date of Submission : **June 25/2015**

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Title of the Project : **EVALUATION THE IMPACT OF WORLD VIISON ETHIOPIA, WATER, SANITATION AND HYGIENE PROJECT ON THE COMMUNITY: The case of Amhara Region, West Gojjam Zone, Jabi Tehnane Woreda**

Signature of the Student \_\_\_\_\_ -

Approved/Not Approved.....

Date.....

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*A PROJECT PROPOSAL ON*

*EVALUATION THE IMPACT OF WORLD VIISON ETHIOPIA, WATER,  
SANITATION AND HYGIENE PROJECT ON THE COMMUNITY:*

*The case of Amhara Region, West Gojjam Zone, Jabi Tehnane  
Woreda*

*PROJECT PROPOSAL SUBMITTED FOR THE PARTIAL FULFILMENT OF  
MASTERS OF ARTS IN RURAL DEVELOMNET.*

*TAYE TIBEBU DESSALEGN*

*ENROLMENT NO. : ID1320491*

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## List of Acronyms

WASH	Water sanitation and hygiene
NGOs	Non-governmental offices
CSA	Central statics agency
ADP	Area development programs
WVE	World Vision Ethiopia
WV	World Vision
WHO	World health organization
OWNP	One WASH National Program
SWAp	sector wide approach
SI	Sampling Interval
PFA	Primary focus Area
PLC	Private limited company
FGD	Focus Group discussion
BoFED	Bureau of finance and economy
AMCOW	African Ministry's Council on Water

WASH	Water ,sanitation and hygiene
WHO/UNICEF	World Health Organization
EDHS	Ethiopia demographic health survey
HWWS	Hand washing with soap
KA	Kebele Administration/The lowest administrative unit of government/
GTP	Growth and transformation plan
OWNP	One wash national program,
ODF	Open defecation free village
(ARI	Acute respiratory infections
CLTS	Community lead total sanitation
HH	House Hold
MDG	Millennium development goals
CLTS	Community lead total sanitation
MUS	multiple use water services

## 1.Introduction

Water is one of the primary driving forces for sustainable development of any country, where its environmental, social and economic development are to a large extent dependent on improved water supply services. (Yewondwosen, 2012). Access to water supply and sanitation is a fundamental need and a human right (Global Water and Sanitation Assessment report, 2000).

Universal access to water and sanitation could prevent thousands of child deaths and could give ample time for women and children to go to work or school. In Ethiopia, access to rural water supply was among the lowest in the sub-Saharan Africa. However, over recent years, access to water supply has been on an increasing trend in rural Ethiopia. Though different data sources show different figures, all sources confirm that water supply in rural Ethiopia is on a strong upward trajectory. (Yewondwosen, 2012). The official government data states that rural water supply coverage has risen from 11% in 1990 to 62% in 2009, ( AMCOW,2010 ).The AMCOW second round Country Status Report 2010, also shows a remarkable increase in coverage, i.e. 1 million people per year for the period 1990 – 2008 at the national level ( AMCOW,2010 )

Increasing the number of people with access to safe water supply, sanitation and hygiene has proven to be a tremendous challenge throughout the developing world. Despite huge investments over the years in the water and

sanitation sector in the Amhara Region, millions of rural poor communities still remain without adequate water supply and lack improved sanitation services. Although numerous schemes have been planned and implemented in Ethiopia, only a proportion of these schemes continue to provide water to the communities that they were intended to serve. The failure in service may have been caused by a multitude of reasons including poor technology selection, insufficient maintenance, malfunctioning equipment, inadequate community planning or participation and many others. By recognizing the combination of factors that have led to the success or failure of a water scheme, more meaningful and enhanced strategies can be arranged and employed for the preparation and implementation of more successful schemes. Therefore, the chief factors of each Water, Sanitation and Hygiene (WaSH) scheme should be fully documented by implementers, other partners and the communities being served by them in order to better explore a scheme's likelihood of remaining functional and challenges to its sustainability. (Seifu et al ,2010).

Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in households and across communities. Provision of water and sanitation also plays an essential role in protecting human health during crisis and disease outbreaks.

Ethiopia has made remarkable progress in water and sanitation over the last two decades. According to WHO/UNICEF Joint Monitoring Programme 2014 report, the country has improved water supply by 57% (97% in urban areas and 42% in rural areas), thus achieving the Millennium Development Goal (MDG) 7 target 7C. Although the sanitation target has not yet been achieved, there has been tremendous progress during the past decade in improving sanitation and ending open defecation. The progress has been largely due to the establishment of a Government-led WASH coordination mechanism (ONE WASH programme) involving Ministry of Water, Health, Education and Finance and Economic Development, as well as development partners. (WHO/UNICEF Joint Monitoring Programme 2014 report)

Despite the progress seen in Ethiopia, 43% of the population does not have access to an improved water source and 28% practice open defecation.(NWI 2012) .The National WASH Inventory (NWI) report of 2012 also indicates that the majority of health facilities in Ethiopia lack access to clean water and only about 32% have access to safe water. Moreover, 17% of childhood deaths are associated with diarrhea (EDHS 2011) which remains the third leading cause of under-five mortality attributed to poor water, sanitation and hygiene.( WHO,2016.)

Before World Vision's involvement in the communities, an intermittent access to safe and sufficient water left many families (in particular, women and children),

carrying water (not always of good quality) over long distances to serve their drinking, cooking, and washing needs. Many villages had a sanitary history of open defecation, or the use of 'bush toilets' (open dry pit) which not only caused environmental problems in terms of spreading pollution and pathogens, but such pathogens in the environment can be transmitted and can cause incidences of eye and abdominal disease in children. Excreta washed to water sources exposed these communities to larger health risks that in some cases increased medical expenses and reduced productivity due to increased incidence of water borne disease.

World Vision Ethiopia Jabi tehane Area development WASH project sought to improve access to safe water ,sanitation and hygiene in the target communities by supporting in the construction of water supply schemes and implementing community led total sanitations, improving the capacity of communities towards practice of good hygiene behaviors

### **1.1 Statement of the problem**

Water is one of the primary driving forces for sustainable development of any country. The environmental, social and economic development of a country is to a large extent dependent on improved water security through effective management of water resources. However, sustainability of rural water supply schemes, and the benefits they deliver, has now become one of the superseding concerns of the sector. Every year millions of dollars are invested by

international financiers and national governments, for project implementation, despite increasing attempt to tackle the limiting factors, and many still fail to maintain the flow of expected benefits over their intended lifetimes of 10, or even 15 years, (WSP-Africa, 2010)

According to CSA 2007 census report the potable water coverage of Jabi tehnane Woreda is 42 % ( 91 % for urban and 39 % for rural dwellers ). Regarding toilet facilities utilization 50 % of the communities do not have any toilet facility that means they practice open defecation.Regarding waste disposal 89 % of rural and 59.9 of urban dwellers dispose waste on open space around their homestead. Looking Diarrhoea prevalence 32 % of children under 5 years age were vulnerable for diaphorea according to WV survey in 2007. World Vision Ethiopia Jabi Tehnane Area development program planned implemented Water, sanitation and hygiene project by allocating large amount of budget and human resources to solve this problems. As a result many water supply structures were built and empowerment training on hygiene and sanitation were conducted. Evaluation of 5 years the program 2008-20012 were held in 2012.Now this research will evaluate eight years project implementation from 2008-2015. Most projects fail to attain their goal due to different reasons though huge amount of human and financial resources are invested.

**Project Goal** :-Improve access to adequate safe water and sanitation and hygiene practices.

**Project Outcomes 1.** Improve access to sustainable and adequate safe water supplies.

**Project Outcome 2.** Improve sanitation services for Vulnerable Children & Communities.

**Project Outcome 3 .**Improved hygiene practices

**Project Outcome 4.** Increase community capacity to manage water supply schemes.

### **1.2Objective of the study**

The final evaluation report of Water aid Ethiopia studied on 2010 states, although numerous schemes have been planned and implemented in Ethiopia, only a proportion of these schemes continue to provide water to the communities that they were intended to serve. The failure in service may have been caused by a multitude of reasons including poor technology selection, insufficient maintenance, malfunctioning equipment, inadequate community planning or participation and many others.

Hence the purpose of this evaluation was

- to assess the performance and outcomes of the project,
- the challenges encountered during program implementation,
- Asses strengths, Weakness, of the program, and document the lessons learned for future programming.

### **1.3. Specific Research Questions**

- ✓ How much population benefited from WV water supply projects?
- ✓ Impact of these water schemes on life of communities, Do diarrhorria and water borne diseases reduced after intervention?
- ✓ Does behavioral practices on sanitation and hygiene improved after WV intervention?
- ✓ Does the community owned the water supply schemes constructed by world vision and participated during the project planning and implementation?
- ✓ How much is institutional wash status.
- ✓ How much of the water supply schemes are functional to day?

### **1.4. Scope of the Study**

This study was designed to assess the plan and achievement, functionality, and utilization of Water supply projects implemented by World vision. Accordingly, the specific areas of focus are as follows.

I. Planning and implementation – The research will analyses how many planed water supply and sanitation schemes were accomplished,

II. Functionality –functionality refers to the number or percentage of functional water supply schemes.

III. Community participation and ownership-Do the community participate in Cash, in kind and labor during construction. Do the water supply schemes are handed over appropriately. Do each water supply scheme have active water committee.

### **1.5. Organization of the Document**

This document consists of five main sections as follows. The following section (section two) focuses on the theoretical background, with a main concern on, water supply, sanitation, hygiene and community participation, In Section three, the research methodology and framework employed, and the sampling procedures adopted to gather the required relative information, are outlined. Section four deals with analytical description of the findings, with empirical evidence obtained from site visits and secondary sources. The last section, section five, presents conclusions and recommendations on a number of specific issues and suggests areas for further research.

### **1.6. Definition of Important Terms In This Project**

- **Water Supply Projects** - In this study, the term “Water Supply Project” refers to the simple rural water supply schemes i.e shallow wells, hand-dug wells and spring development and Rope Pumps.
- **Community** - In the present study, the term “Community” would mean a group of people living in a specific proximity, and who are beneficiaries of a rural water supply scheme constructed in their vicinity.
- **Access to water supply** – Availability of improved water sources within 1 km

distance or 30 minutes round trip water hauling time .

- **Home treatment of water**- involves any method proven to be effective in removing or killing pathogens such as boiling, adding bleach or chlorine, using water filter, solar disinfection and settling.
- **Hygienic practices**- are washing hands at critical times, proper handling & storage of water, keeping latrines clean and proper disposal of child's feces.
- **Improved sanitation facilities**- are those more likely to ensure privacy and hygienic use /easily cleanable includes connection to public sewer, connection to septic tank, pour-flush latrine, simple pit latrine and ventilated improved pit latrine,
- **Improved water source**- includes household connection, public stand pipe, borehole, protected dug well, protected spring and rain water collection.
- **Safe handling of water**- getting water from a container by separate dipper or container with spigot of or narrow neck container.
- **Sanitation**- latrine
- **Unimproved sanitation**- includes bucket latrine where excreta are manually removed, public latrines and latrines with an open pit (35)

**Functionality** – under the present study, the term functionality refers to the number or percentage of currently working/operational rural water supply schemes out of the total number of rural water supply schemes constructed over the previous years.

**Woreda** - is the lowest administration unit (next to Kebele), in the Ethiopian government's administrative hierarchy.

**Kebele** - Is the lowest administration unit in the Ethiopian government's administrative hierarchy.

## **2. Methodology**

Taking in to account the required level of precision, budget, time and operational constraint, a sample size of 400 was recommended as standard sample size for house hold survey. To make this real a random sample of 40 clusters (or villages) will be selected from Kebele and then a total of 400 households (10 households from each cluster) will be selected using systematic random sampling technique.

### **2.1. Research Methodology**

To undertake project evaluation the following methods will be used. A literature review, interviews, field observation and focus group discussions (FGDs) with key stakeholders including project beneficiaries, local woreda staff, who had been involved in executing the project, and local authorities.

### **2.2. Study Area**

Jabi Tehnan Woreda is found in west Gojam zone of Amhara National Regional State. The woreda's capital, Finote Selam is located at a distance of 380 Km North-West of Addis Ababa. The population of the Woreda is estimated to be 211,011 among which economically active population age 15 - 64 is 56.7 % . ( Source Amhara Region BoFED 2015 Forecast ).The average number of family size is 5. The male to female ratio is almost one to one. The predominant ethnic group is Amhara about 98 % and they speak Amharic. (Design Document, P.15, ) With regard to religious mix 97.05 % are Orthodox Christians, 2.84 % Muslims and, 0.11% are Protestants. The majority of the population (93.8%) lives in the

rural areas predominantly dependent on subsistence agriculture while the remaining (6.2%) live in urban or semi urban areas. The woreda have 39 kebel of which 3 semi urban KAs. (WVE micro assessment report, 2007).

Table 1. Projected population number 2015/6

Location	Total population		Children under 2		Children under 5		Mother s
	F	M	F	M	F	M	F
Rural	92622	91576	3570	3541	14280	14266	2871
Urban	18439	15650	700	595	2765	2347	530
Total	111061	107226	4270	4136	17045	16613	3401

Source; Jabi Tehnane Woreda Administration office report 2016

### Topography and climate

The altitude of the woreda ranges from 1,500-2,300 m. above sea level. The majority of the area lies in the higher altitude range, closer to 2,300 m, and all four of the project kebeles are found in the Woyna dega or mid-altitude area, each with similar agro-ecology and similar temperature and rainfall distribution. Agro-ecologically, 88% of the woreda is classified as Woyina Dega and the remaining 12% as kolla. The topography of the woreda is dominated by areas of plain. According to the woreda office of agriculture, the topography is classified as: 65% plain, 15% mountainous, 15% undulating, and 10% valley. The temperature of the 'woreda' ranges between 14 and 32 degree celcius, with an average

annual temperature of 32degree Celsius. The rainfall distribution is uni-modal and the rainy season lasts for four months from mid-May to mid-September. The average annual rainfall is 1,250 mm per annum.

### **Land use and soil**

Since the majority of the population lives in the rural area with crop production as the main livelihood option, arable land constituted the largest portion of the woreda land use type. The proportion and areas under different land uses in the woreda are as follows (woreda office of agriculture):

- Cultivated land: 49.8% or 58,262 ha
- Cultivable land: 4.4% or 5,208 ha
- Natural forest: 5.5 % or 6,502 ha
- Bush /scrub land or natural pasture: 17.6% or 20,662 ha
- Settlement: 9.3% or 10,931 ha
- Others: 13% or 15,389 ha

The soil type of the woreda is classified as 60% red soil, 25% brown, and 15% black soil. The soil fertility can be classified as 27% fertile, 71% medium and 2% infertile (source: woreda office of agriculture). The presence of well-developed fertile soil is considered to give the woreda strong potential for increasing the productivity of smallholding farmers.

Mixed farming, with crop and livestock production, constituted the main livelihood for the rural community of the project 'woreda'.

## **2.3 Sampling Procedures**

### **Sampling households**

Mix of two stage cluster sampling and systematic random sampling will be applied to select the households or caregivers. First clusters/villages/gotes will be selected applying PPS and then households will be selected with systematic random sampling method based on the sampling frame that will be prepared for the selected clusters. The sample size is determined to be 400 households considering the sample size taken during baseline as well as the resource allocated for this measurement.

#### **Steps for Cluster Sampling**

1. Defining geographical coverage: this might include primary focus area (PFA) in which WV is currently implementing.
2. Prepare the list of all Villages with total number of households and population with six column table.
  - # Kebele
  - Village/Gote
  - Number of households
  - Cumulative Sample

3. Calculating the sampling interval (SI). Sampling interval is the result we get by dividing of total number of households in the impact area/PFA/ by total number of clusters we need which is 40 in this case.

Sampling Interval = Total number of HH/ 40

4. A random number between 0 and SI were identified the first cluster, using random number table.

5. The sampling Interval will be added to the random number identified in Step 4 to get the second cluster. Continue adding the SI on the results until you identify the last cluster that is 40th cluster.

### **Steps for Household Sampling**

1. List of household heads will be prepared in the cluster selected.

2. Calculate the sampling interval (SI). Divide the total number of households in the cluster by sample size per cluster that is (10)

3. Take a random number between 0 and SI to identify or select the first household, using random number table,

4. Add the sampling Interval to the number you took on step 4 to identify the second house hold. Continue adding the SI on the results until you identify the last cluster that is 10th cluster

## **2.4 Data Collection**

Primary and secondary sources will be used for data collection. The primary sources are data collected using both quantitative and qualitative methods. The quantitative approaches include the household survey, while qualitative information is collected in the form of a participatory impact assessment which encompasses focus group discussions. Data from secondary sources includes relevant project documents obtained from Woreda offices ,WVE reports .Structure data collection sheet were prepared and concerned offices were requested.

### **ii. Household Survey Questionnaires**

The data collection instrument for household survey was developed prior to the start of field work and based upon prior WASH surveys. 10 enumerators will be selected and trained on the questioner. The questions in the questionnaire are targeted to capture responses of beneficiaries, primarily women . Collection of water and water-related household labor is traditionally and still predominantly a role of women. The questionnaire specifically enquires information regarding access to water sources access and utilization of Sanitation facilities and hygiene practices pre and post project implementation.

### **ii. Focus Group Discussions/FGD/**

Group discussions will be held and participants of each respective visited WASH site explained details of the projects. Some of the important information collected from FGD assessment included community participation during from planning, construction to utilization, ownership, water management committee roles, operation and maintenance, and water management and sustainability issues. Shortcomings of the interventions, possible ways for improvement, limitations in technical capability and issues related to operation and management were raised in all the group discussions. Women representation was emphasized as they experience the benefits and shortcomings of the projects on a daily basis.

### **iii. Data Supervision, Verification, and Timeline**

The implementation of fieldwork will be supervised by me. Research activities will be overseen and coordinated by an experienced Assistant researcher who was responsible to arrange field visits, arrange meetings with FGD, WVE staff and compile and cross-check completed Questionnaires for consistency and completeness.

### **2.5 Data Processing**

Data entry will be done by CsPRO and analysed by SPSS. Reports from group discussion were disaggregated to formulate a list of issues for evaluation and these were summarized in the results and discussion part as well in

conclusions and recommendations section. Finally, analyses were made for core performance indicators that help to compare attribution of the project interventions to improvement of livelihood.

## 2.6 Limitation

- The understanding and expectation of the respondents about the data collected may have an impact on the quality of the data
- The experience and skill of the enumerators to keep the consistency of the information on the spot.

## 3. Bugdet

Table 2 .Budget Estimate

S/N	Research activities	Measurement	Duration	Cost
1	Field Allowance for researcher for 10 days 250 per day	Days	10 days	2500
2	Train Data collectors for 2 days, Perdiem for 5 data collectors 150 Birr /day,	days	2days	7500
3	Enumerators/ Data collectors perdiem, for 5 enumerators, 150 birr/day for 10 days each	days	10 days	7500
4	Typing ,photocopy& Binding of Report	Lump Sum	Birr	3500
5	Vehicle Rent 1000 Birr per day for 5 days	days	5days	5000
6	Contingencies (10 %the expenditure for items 1 to 5)	Lump Sum		2000
	Grand Total			22000

## 4.Preliminary work Plan

Table 3.Time Estimate

S/N	Research Activity	Time Required
1	Identification of Problem	2week
2	Review of Literature	1week
3	Identification of Objectives	1week
4	Selection of Research Design	1week
5	Selection of Sample	1 week
6	Preparation of Tools	2 week
7	Data Collection	2weeks
8	Editing of Data	2week
9	Preparation of Master Chart	1 week
10	Processing of Data	1 week
11	Statistical Analysis of Data	1 week
12	Writing of Report	4 week
13	Presentation of Report ,printing ,binding	1 week
	Total	2o Weeks

## 5. CHAPTER PLAN

- The first chapter shall be an introduction
- Second chapter review of the literature
- Third chapter Methodology used
- Fourth chapter result and discussion of the findings
- Fifth chapter Summary and conclusion

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