WOLKITE UNIVERSITY

COLLEGE OF SOCAIL SCIENCE AND HUMANITIES

DEPARTMENT OF GOVERNANCE AND DEVELOPMENT STUDEIS

ASSESSMENT OF FACTOR AFFECTING SERVICE QUALITY AND SUSTAINABILITY WATER SUPPLY IN WOLKITE TOWN

ASENIR ESSAY SUBMITTED TO THE DEPARMENT OF GOVERNANCE AND DEVELOPMENT STUDIES, COLLEGE OF SOCIAL SCINCE AND HUMANITIES, WOLKITE UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF BACHELOR OF ARTS IN GOVERNACE AND DEVELOPMENT STUDIES

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Abstract

The role of water is not only focused on its central role to achieve environmental sustainability and to meet the target on water supply and sanitation, but also centered on other developmental activities. However, in most developing countries, limited access associated with poor water supply, hygiene and sanitation is widening the poverty gap. This study was conducted on assessment of factors that affecting service quality and sustainability of water supply in wolkite town. The study conducted by using descriptive type of research design and the study used both primary and secondary sources of data that were collected through questionnaire. The researcher used simple random sampling technique to select respondent and descriptive method of data analysis. The data was also gathered using both secondary and primary source of data. Primary data was also gathered using questionnaire. The secondary data was collected from organizational document. Those data would also be analysis by using descriptive statics and summarized using tabulation method, frequency and percentage. In general this study aims to indicate the service quality and sustainability of water supply in wolkite town.

Acronym

SNNPRS= South Nation Nationality and People Regional State

CTA= central Statics Agency

BWR= Basic Water Requirement

MDGs = Millennium Development Goals

O&M = Operation and maintenance

USS = Urban water supply schim

VLOM =Village level operation and maintenance.

WHO = Worled Health Organization

WWSI = Wolkite Town water service Institution

WTM = Wolkite Town Municipality

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Chapter one

1. Introduction

1.1 Background of the study

Water supply was among the most essential natural requisites for sustenance of living thing. Life an earth could be impossible. No living thing plant animals or human live without this precious liquid throughout history. Water has been people slave and their masters. Great civilization has risen failed. People have killed one another for muddy water hale. Sometime the rains have fallen too heavily and too suddenly. Then rivers have been over flowed their bank, drawing large numbers of people and causing enormous destruction of property (Udimal et al., 2017).

Water helps to keep the earth climate from getting too hot and too cold. Water is important for human beings at home and in our modern industries to manufacture different industrial products besides we also use water to irrigate dry from lands and to produce electricity (Lima et al, 2018).

Ethiopia is geographically located a region where the climate was complimented with comparative higher amount of rain fall. This has given the country with immense water resource potential. Based on some preliminary studies conducted. It was estimated that the country had an annual surface runoff of close to 122 billion cubic meters of water excluding ground water Ethiopian water resources management police. The countries ground water professional had not yet adequately studied but professional estimates had put an approximate figure of 2.6 billion. Inspect of that this immense potential reality sizable population of the country used to have faced uneven water distribution and inconsistency of its accessibility in terms of time and space (ADF, 2005).

Service as any intangible act of performance that one party offer to another that does not result in the ownership of anything satisfy state or imply need. It is evident that quality is also related to the value of an offer, which can satisfaction or dissatisfaction on the part of the user . Service as economic activity typically produce an intangible product such as transportation, educational, insurance, trade ,government .stiff computation increase awareness of customer and viable demand needs continuous improvement from the organization in quality service so that their customer stay loyal (khaeng etal 2010).

Quality of water supply is central to the overall health of the High Plains agricultural economy, the viability of its cities and Urban or rural communities, and the environmental well-being of the landscape. Scarcity of traditional water sources, such as surface and groundwater, couples with low water use efficiency are increasingly threatening the security of urban, agricultural, and environmental water needs (Becker, S.2013).

The term "sustainability" originated around 1980s as an approach to growing the economies Sustainable is commonly as meeting the needs of the present generation without compromising the ability of future generations to meet their own needs Without destroying the environment or sacrificing the well-being of future generations for sustainability is a desire to create a society that is safe, stable, prosperous, and ecologically minde. Nearly all definitions for sustainability in recent years emphasis' the notion that human society and economy are intimately connecte to the natural environment (Andrew, S 2013].

Sustainability in water supplying organizations is achievable through cost-effective life cycle analysis. Planning is important in making decisions on infrastructure investments, resource utilization and alignment of organizational goals with community goals. In addition, planning will be incorporate waste water management into water supply infrastructure to enhance water supply and management operations (Buy Smart Network, 2007).

Sustainable livelihoods requires safe and adequate water supply system where due consideration is given for the protection of ecosystem. Besides, it necessitates the formation of conditions for an enhanced cooperation of stakeholders involved in water use and minimizes competition. This in turn calls for stakeholders' preparation of disaster management plan and producing implementation modalities as per the specific area context. Last but not least, stakeholders need to capitalize on the significance of water, scale up the awareness level of water, and give due emphasis for management and governance of water resources (UN World water, 2003).

1.2 Statement of the problem

Water is a fundamental requirement for human life and well-being, thus proper management of it means to improve food production, reduce poverty and water-related diseases. Water is life and especially potable water is essential for life and health. So, access to drinking water, improves overall socio-economic and environmental existence. In the world more than one billion people do not have access to safe drinking water and over 2.5 billion people have inadequate sanitation.

In Africa around 300 million people do not have access of safe drinking water and 313 million have no access to sanitation. That means Africa has the lowest total water supply coverage of the other continents in the world (USAID, 2009).

Ethiopia standard water supply is very poor. Most of population does not have access to adequate water supply in terms of service quality coverage and quantity. A severe problem in Ethiopia water is only provide for a few hours every day or a few days week, due to, lack of appreciation of the variability in the nature and occurrence of water resource, financial constraint those are the major reason for expensive and unreliable water supply(http://www.com Ethiopian water supply com).

When come to the southern nation's nationalities and peoples regionals state (SNNPRS) the service quality and sustainability of water supply is very less coverage. The problem associated inadequate supply service in the region contribution to urban degradation and case damages to public health. This is the problem affects the communities regarding to the service quality and sustainability of water supply. Those understand the shortage of service quality of water supply and sanitation of water which provide for the communities (SNNPRS CTA, 2018).

The problem associated with inadequate supply service in this town contribution to urban environment degradation and cause damages to public health. Hence the, dwellers explained problem of water supply in Wolkite town was not only the problem of adequacy service quality but also it has been the problem of distribution and reliability (Ellen and Kellog,2005).

There were studies on an assessment of urban water supply and sanitation the case of Ambo town (Chala, 2011); Analyses of affordability and determinants of willingness to pay for improved water supply service in urban areas (Alebel, 2002). The researchers to show that the factors that affect service quality and sustainability of water supply and further more shows that factors of that affecting services quality sustainability of water supply. but there is no such prior research perhaps appears to the first academic investigation of factor affecting service quality and suitability of water supply wolkite town.

1.3.1 General objective

To assess factor affecting service quality and sustainability of water supply in Wolkite town.

1.3.2 Specific objective

1, To identify factor that affect service quality of water supply in Wolkite Town.

2, To assess the factor that affects the sustainability of water supply in Wolkite Town.

3, To recommend ways for the betterment of service quality and sustainability of water supply in Wolkite Town.

1.4 Research question

1. What are the factors that affect service quality of water supply in Wolkite town water supply scheme?

2. What are the factors that affect the sustainability of in Wolkite town water supply?

3. What are factors that can be contribute for betterment of service quality and sustainability of water supply in Wolkite Town?

The Study was conducted in the South Nation Nationality Peoples of Ethiopia in Wolkite town**.** study was more attractive and important if it was conducted on country level. However, because of existing time and finance constraint mainly focused to SNNPR in Wolkite town. It was mostly conducted all regions but this study concentrate specifically focus on Wolkite town.

1.6 Limitation of the study

The researcher faced the following expect limitation, finical, constraints, insufficient time, respondents were unable to return questionnaires on time, luck of secondary data and lack of experience, reference books for study are also rarely available and this influence study to some extent to review the literature the date are fragment and very difficult to access and get the necessary information, no adequate documents, and the shortage of time and finance are also major challenge to accomplish paper.

1.7 Significance of study

This study attempted to assess the factor that affects service quality and sustainability of water supply in Wolkite town. this study is helpful to alleviate the problem associated with poor service quality and sustainability of water supply upon its findings. the research paper has the following benefit, to point out the main challenge of effective service quality and sustainability of water supply in Wolkite town, It will be important to find solutions to water supply service quality and sustainability problem, in addition it tries provide possible remedy in orders to solve

problem, so that problem may be solve, it can be used as reference for author researchers who want to undertake research related to this topic.

1.8 Organization of the paper

The paper was organized in to five chapters. The first chapters contain background of the study, statement of the problem, objective of the study, Significance of the study, scope of the study, and organization of the paper, limitation of the study and research question. The second chapter was contain the general review literature, which contains theoretical review The third chapter was contains: The research methodology the study such as description area of the study, sample design ,source of data, sample Technique and procedure, sample size method of data collection The fourth Chapter was contains : data presentation, data analysis and interpretation. The last Chapter was contains conclusion and recommendation research.

Chapter Two
2. Literature review

2.1 Service

Service is any act or performance on party to another that assembly intangible and does not result in the ownership of anything. Its production may or may not be tied to physical products. Increase manufacture, distribution for and retailer are provide value add service or simply excellent customer service to differentiate themselves. Many pure service firms are now using the internet to reach customer (Kittler, 2006).

2.2 Service quality

In order to a company offers to reach the customer there need for service this service depends on the type of product and it different in various organization .Service can be defined service as any intangible act of performance that one party offer to another that does not result in the ownership of anything satisfy stated or implied need. It is evident that quality is also related to the value of an offer, which could evoke satisfaction or dissatisfaction on the part of the user (Kotteler, 2009).

Service quality in management and marketing literature is extent to which customer perception of service meet and exceed their expectations .This service quality can intend to be the way in which customer are served in an organization which could be good or poor Service quality as the difference between customer expectations and perception of service. Measuring service quality as difference between perceived and expectations of service was availed way and could make management to identify gap to what they offer as service. The aim of providing quality service is to satisfy customer measuring service quality is better way to dictate weather the service quality are good or bad and weather the customer will or are satisfied with it. A researcher listed in his study their component will or are satisfied with it. Service quality was describe compromising of three elements

- Physically facilities process and procedure
- personal behavior on the part of service staff
- Professional judgment on part of serving staff but to get good quality service.

Service process from the look of things, this idea of his could be design to fit with evaluate service quality with the employ perspective. On of most useful measurement of service quality is dimensions from the service quality model in the creation of this model for the very first time. The service quality scale which is also known as gap model (David, 2005).

This service evaluation method has been proven consistent and reliable by some authors, they held that when perceived or experience service is less than expected service. It implies less than satisfactory .from the way of this theory is presented it seems the idea of service quality best fits the evaluation of service quality from the customer perspective. This is because when it is stated perceived and expected service. It is very clear that this goes to the person who is going to or is consuming the service, who defined is the consumer customer:-

Tangibles: the appearance of physical artifact and staff member connected with the service (accommodation, equipment, staff uniform and so on).

Reliability: the ability to deliver the promise service.

Responsiveness: the readiness of staff member to help in pleasant and effective may.

Competency: the capacity of staff member in executing the service.

Courtesy: the respect thought fullness and politeness exhibit by staff member who are contact with customer.

Credibility: the trust worthiness and honesty of the service provided.

Security: the absence of doubt, economic risk and physical danger.

Access: the accessibility of the service provider.

Communication: an understandable manner and use of language by the service provider. Understanding customer: effort by the service provider to know and understand the customer (Jain et.al, 2004).

2.3 Customer satisfaction and service quality

Regarding to the relationship between customer satisfaction and service quality, first suggested that service quality would be antecedent to customer satisfaction regardless of whether those construct were cumulative or translation specific some researchers have found empirical support

for view of point mentioned above. In relating customer satisfaction and service quality researcher have been more précis about the meaning and service quality have certain things in common but, satisfaction generally is border concept, what as service quality focus specifically dimension of service. Although it is stated that other factor such as price and product quality can affect customer satisfaction, provide services quality is a component of customer satisfaction and has been confirmed by the definition of customer satisfaction presented by other researcher (Zenithal, (2006).

2.4 Urban Water Supply Schemes Management

Community management is all about putting communities in charge of developing systems that respond to their needs. Water for productive uses is high on this list frequently even higher than is treated water for domestic use into account the downside, not taking likely productive use into account can lead to system under design and, in turn, to failure livelihoods approaches, which emphasis the capabilities as well as the needs of people and take in consideration the complex nature of the communities and intra-community relationships, can help optimize the community involvement in system design and implementation. Similarly to community management (with which they are frequently linked), demand responsive approaches are all about matching systems to people with the primary goal of achieving sustainability. Productive users of water have a crucial role to pay in turning water into the cash with which to spare parts and pay for routine maintenances. Clearly, establishing the link between water supply economic benefits also seems to increase people's willingness to pay for their water in the first place (IRC, 2003).

Some evidence revealed that properly supported communities have both ability and willingness to manage their own water systems. Community management of the urban water supply services is considered as one of the options for achieving sustainability of the water services. Agency resources that are used for provision and maintenance of insufficient services can be diverted to a much more effective facilitating role, bringing greater cost effectiveness and more wide spread and sustainable benefits. Less demand for reconstruction or rehabilitation of broken down systems means more satisfying and more productive work on new schemes. Similarly, studies in Tanzania and Thailand suggested that the

water supply systems which provided the most reliable services were those and maintenance of the schemes, but met them in full (Gabriela et al, 2018).

2.5 Management and Governance

There is general agreement in the literature that management is an important element in all water development schemes, determining success or failure. Quite frequently in Ethiopia, planners are emphasized the agronomic, engineering or technical aspects of water project and most of the important decision have been made by technical experts, with little regard to issues of management and beneficiary participation. Moreover, where participation has been tried, it has meant peasants to set up users bodies and elect officials, both of which have little say in project management. Participation of this sort has rarely involved participation decision making or in management. In brief, such practices have proved counterproductive and have contributed to the failure of many water schemes. If water projects, are to be managed efficiently and are to be sustainable it is important to promote beneficiary participation based on new principles (Roger, 2012).

The principle underlining this option is that the main stakeholders should be actually involved in the management of water supply projects on the one hand, and on the other in the formulation of the rules and responsibilities governing the operation of such projects. There are two elements involved here, management and governance. Management refers to the day to day operation of project whereas governance involves the establishment of working rules and responsibilities the choice of conflict resolution modernisms, the selection and control of technical staff, and mechanisms for accountability of users and officials. Government bodies may issue uniform rules that deal with problems common to each category of water project but to deal with the specific problems that arises in specific conditions, working rules are necessary. Management is concerned with formulating the working rules common to the entire project itself. The direct stakeholders should be closely involved both in the management and governance of the water projects. Participation in management without participation in governance is meaningless. Water governance is the set of systems that control decision making with regard to water resource development and management. Hence, water governance is much more about the way in which decisions are made (i.e. how, by whom, and under what condition ons decisions are made) than the decisions themselves (melani, et al, 2009).

2.6 Management and Operational Skills

Management capacity is essential for two largely different groups of people in the community: first for technical people such as pump minders, care takers operators, network managers, engineers, etc.; and second for the managers themselves, the „committee" who are responsible for overseeing the former while also taking more strategic decisions such as what tariffs to set, or what services, level to adopted. Typical roles of committee include: representing the community in contacts with government officials, support agencies and he private sectors; coordinating roles with other community institutions and decision-making bodies; ensuring efficient and effective overall management; ensuring equity of water use and distribution; ensuring equity in decision making; financial planning, calculating and organizing contributions; organizing and supervising effective O&M; enforcing rules and regulations; maintaining accurate records, including financials records, minutes of meetings and important data such as member lists; promoting hygiene and effective use of facilities and holding and leading regular meetings (Ton, S and Patric M, 2003).

An important difference between these two groups of people is that of voluntarism and professionalism while management committees are almost in variably voluntary on in the simplest systems should O&M be an unpaid task. In more complex systems it represents a full-time job for one or more people. As this role is increasingly played by community members, finding money for these people represents an important part of cost recovery. (Melkamu, E 2008).

2.7 Factors that affect quality of water supply

1. Community factors

the community factors which are likely to impact sustainability of water supply schemes are:

-The availability of demand or perceived need for an improved service

-Management through locally organized & recognized group

2. Demand for an improved service

Demand for an improved service by the communities is a prerequisite for sustainability. It is an expression of their commitment, and a way to make communities responsible for their choices and future tasks. However, demand should be promoted because communities must be made aware of the different technology options available, and of their financial consequences. Demand

can be manifested in the form of an initial contribution in cash or in kind to capital cost, or in the form of a written solicitation from organized community group to the competent authority/responsible organizations. As a result, responsible organizations should determine and respond what the community wants, and is able to support and sustain, instead of providing water supply facilities that have not been demanded for. Water supply agencies should ensure the projects that are based on effective demand are given the first priority (Brikke, 2000).

Experiences has shown that when development interventions align to the priorities of community, the sense of ownership increases, as does the likelihood that a community will work to maintain the results, thereby increasing the chance of sustainability. It was also indicated that water supply services which are more demanded responsive and more likely to be sustainable at the community level than services which are less demand responsive. In all cases, it emphases the need of community members demand for improved service proper to its implementation if the scheme has to be sustainable (Bezabih, 2008).

3. Community participation

Community participation refers to "an active process whereby beneficiaries influence the

direction and the execution of the development project rather than merely receiving a share of a project benefit". In order to increase the changes of the water supply system to meet the needs of users, community participation should begin as early as possible in the project development.

In fact, community participation should begin as soon as a community has requested water supply facility. Therefore, community member should be directly involved in planning the new scheme and deciding how it can run, and by so doing, the prospects f its success so improved (musonda, 2004).

4**. Willingness and ability to pay for services**

Providing services which people can afford is a pre-condition for cost recovery (partial cost-recovery in rural water supply case in Ethiopia). Being able to pay for something and being willing to do so, however, do not always go hand in hand. From economists points of view demand is only real (or "effective") when it is accompanied by wiliness to pay, in cash or kind, for goods or services offered. From these points of view, willingness to pay and demand

essentially means the same things (Evans 2004).

5. Community management

Community organization therefore, entails that a community has the institutional capacity to manage the development and operation of the water supply schemes, if it is to be sustainable. Hence responsibility to manage water supply system should not be transferred onto the

community structure that does not have the capacity to operate and maintain it. Because of aforementioned reason, community management of water system usually relies on the formation of a water committee which is responsible for all management issues related to water supply in community (Ellen, J.L. and Kellog.J.S. (2005).

6. Technology selection in the organization

Technology selection is crucial to sustainability of urban water supply schemes because the type of technology chosen affects O&M. If a community is mange water supply system, the technology used needs to be the type that community care takers can maintain with the outside assistance. Also, technology must suit the existing locally available skills or skills that can be acquired by community members. Technology is considered suitable if it is socially acceptable, economically viable, technology effective, and environmentally sound. Communities should have a say in technology option. The technology option should not too technical and beyond the comprehension of community member (musonda2004).

Socio-economic viability, social acceptability and appropriateness of technology influence the ability and willingness to manage the improved water supply systems. The use of appropriate technologies, which are low, cost, easy to maintain, simple to use, and readily available is one response to challenge of sustainability. Appropriate technologies are integral to the concept of village operation and maintenance (VLOM) which emerged in the water decade. The VLOM concept includes the development of hand pumps specifically, designed to be maintained by village care takers, but also extends into the institutional arrangements needed to ensure that skills, and tools and spare parts are available when needed (Arlosoroff et. al, 2006).

7. Availability of tool kits and technical skills needed for O and M

For VLOM hand pumps, there should be trained care takers those can undertake maintenance when needed. The care takers should be capable of doing preventive maintenance work, replacement of worn out parts, and maintain breakage. Therefore, in order to discharge those responsibilities, the care takers should have necessary trainings from the very beginning of scheme installation. Their performance also should be evaluated in continual bases. At the same times the care takers should be provided with necessary tool kits those required for maintenance purposes. However, if necessary skills and tool kits for community hand pump care takers were not provided, this sustainability of these schemes will be compromised (Arlosoroft et al 2006).

2.8 Financial/Economic factor in the organization

Failure to adequately cover costs of improved water supply services in developing countries has been identified as major constraints to achieving the goals of safe water supply for all on a sustainable basis. In recent years, increased community financing through user payment for service has been strongly promoted as a solution (Evans, 2004).

2.2 Sustainability

Sustainability" originated around 1980s as an approach to growing the economies without destroying the environment or sacrificing the well-being of future generations. Sustainability is a desire to create a society that is safe, stable, prosperous, and ecologically minded. Research has shown that urban water supplies in sub-Saharan Africa, particularly those relying on hand pumps, often demonstrate low levels of sustainability. The key causes for this include inappropriate policy or legislation; insufficient institutional support; unsustainable financing mechanisms; ineffective management systems; and lack of Technical backstopping. The problem will only be solved by adopting a holistic approach to planning and implementation rather than focusing on one issue (Niyi et.al, 2007).

2.2.1. The factors that affect sustainability of water supply are categorized in to two main categories.

1. Pre implementation factors and
2. Post implementation factors.

1. Pre implementation factors are

1. Community participation,
2. technology selection,
3. site selection,
4. demand responsiveness,
5. construction quality,
6. population and training

2. Post-implementation factorsare

1. Technical support,

2. Community satisfaction,
3. Institutional
4. Financial management,

One of the pre implementation factors for rural water supply systems is demand responsive

approach. In this context 'demand' is defined as the quantity and quality of water, where community members will choose to consume at a given price. In a demand responsive approach, beneficiaries should feel the need for safe drinking water supply, in order to identify safe drinking water supply projects. Water projects are more or less demand responsive to the degree that beneficiaries make choices and carry out resources in support of their choices. If there is willingness in the community to provide valued resources in the exchange for services then these community members valued the service. As a result demand for supply of water will facilitate the management of the water supply system and it enhances the rate of sustainability of the water supply system (Gizachew, 2005).

In the last three decades, literature in the water supply sector has shown that sustainability of rural water supply structures has become positively associated with small-scale initiatives, which maintain public participation. Involving the users in the planning, implementation, operation, protection and maintenance of water supply systems meaningfully is the key to sustainability. Community members' contributions might take the form of money, labor, material, equipment, or participation in project-related decision-making and meetings (Davis and Liyer, 2002).

Over the past three decades, experience has shown that water and sanitation activities

Are most effective and sustainable when they adopt a participatory approach that acts in response to genuine demand, builds capacity for operation and maintenance and sharing of costs, involve community members directly in all key decisions, develop a sense of communal ownership of the project, and uses appropriate technology that can be maintained at the village level. Also important are educational and participatory efforts to change behavioral practices (USAID, 2009).

The human body's basic water requirement depends on climate, work load and environmental factors. If the work load is high and the season is dry the family use large amount of water per day, whereas the family size increases the amount of water consumed by one person per day

decreases relative to the one that small number of family sizes. Defined the minimum requirement for human body and found that it is between 3 and 10 liters per day. The amount of water needed for other purposes, including cooking or hygiene, is more variable and depends on cultural habits, socio economic factors and types of water supply in terms of quantity, quality and availability. Stated that the international acceptable standards for water requirements for basic needs commonly referred to as basic water requirement BWR (Gleick, 2006).

BWR is defined as water requirement in terms of quantity and quality for the four basic needs of drinking water, human hygiene, sanitation service and modest household needs. This standard is defined by WHO guide line as 20 liters per capita per day (Admassu et. al, 2002).

When springs are used for multiple purposes such as domestic use, livestock watering, irrigation and tanker supply, care should be taken to prevent contamination of watern used for human consumption (Muthusi et.al. 2007).

Relative to hand dug wells natural or developed springs is easily contaminated by different contaminant agents. The effective operation and maintenance (O & M) of rural water supply systems is crucial element for the sustainability of the water project. The community management of rural water supply systems on operation and maintenance (O & M) is not successful, if financing resources are not available and frequent supports are not provided.

Budgeting sufficient funding for rural water supply systems is an important issue for sustainability and proper maintenance but not only one. Binder states that "increasing the budget allocation for rural water supply systems is very important, but that is not the only thing to meet the challenges of achieving the Millennium Development Goals (MDGs)." Enhancing the capacity of the operators' related to the choice of appropriate institutional management is also mandatory to achieve the Millennium Development Goals MDGs (Binder, 2008).

CHAPTER THREE

3. RESEARCH METHODOLOGY

3. 1 Description of study Area

This study would conducted in Southern Nation, Nationality and Peoples Region of Ethiopia, in Guraghe zone particularly Wolkite Town. Wolkite Town is found south west of Adds Ababa and it's about 155Km from Addis Abeba, the capital city of Ethiopia. It also located about 430 km far from the regional capital Hawassa. It was established in 1937 Ec. It is also service as center for to rural administrative Woredas namely Abesihige and Kebena Woredas. Wolkite Town is astronomically located 8/17'N 37/47'E and 8.283/N 37.783/E . The town has an average altitude of 1870Meter above sea level. The climate condition of the area is woinadega. Mainly economic activities of the community are based on commerce and agriculture. The land scope of the area is characterized by flat land scape. According to Wolkite administrative office source in 2010 report the population the town is estimated to be 64319 from this 32802 are female and 31516 are male (WTM, 2011)

3.2. Research Design

This study was mainly aimed at assessing the factor affecting service quality and sustainability of water supply in case of Wolkite Town. the study would be employed a Cross-sectional research design because it needs to contact ones time study population. In this design the researchers could be make only one time contact with study population to study phenomena or an issue at the specific point in time . why because this design simple and cheap in contrast to others since it requires only one time contact with the study population.

3.3 Research Approach

In this study; the researchers was used mixed type of approach, which is procedure for collecting analyzing and mixing both quantitative and qualitative data at some stage of the research process with in a single study, to understand research problem more completely. both qualitative and quantitative approach through descriptive and analytical ways of analysis. the qualitative study would be conducted to gather information from the customers population under here, opinions, experiences and attitudes of customers would be collected through interviews, Observations. Under quantitative study the researchers would be collect information through, questioner, reporting, materials and documents. The study would be adopted survey

method and its design is descriptive research design to describe factor affecting service quality and sustainability of water supply. The method is choose for its low cost and its suitability to observe.

3.4. Research strategy

The research strategy would be express the fellow of research that is qualitative and quantitative strategy. Then the researchers first collected quantitative data and concurrently gather qualitative data`s in the study area. The researchers would be effectively interpret and analysis the data by using the statically analysis of :- table, percentage, frequency, and in form of word and statement.

3.5. Source of Data

There are two type of data sources namely, the primary and secondary source of data. The researchers would be use both source. Under primary source of data was include Survey questionnaire, interview, observation, and other different firsthand information obtained from sources. Whereas, secondary data was data which already existed before the researcher found them. These data are created, collected or gathered by some other person. Secondary data include a range of documents, publication of governments, research studies, technical journals, books, and various publications.

3.6 Target population

The study population of this research was focus in wolkite town it had three sub city and six kebele those sub city namely:- Gubre sub city, Bakur sub city, Addis sub city and also has six kebeles are:- Edgetbere, Addishiwot, Menaharia, Edgetchora , Selambere and under Gore sub city it has only 01 Keble. the total population water customers are 8915. (WTM, 2011).

3.7 Sampling Technique

The researchers would use probability and non-probability sampling technique. the researchers employ simple random sampling design because it gives equal chance for respondents to be selected in which it makes the researchers to obtain genuine information without bias and on the other hand purposive sampling design chosen as a result of the need for obtain data from experts in water development office. Accordingly households are 8915. From this all households 55 are

selected by randomly proportional to their size to become up with the total number of sample size required

3.8 Sampling Size

In order to obtain relevant and reliable information the researcher would took a number of sampling unit selected from investigation. The total number of population of study the three kebele who used the piped water in household are 1320 (Wolkite Town water service institution office bureau document,2011). From above total users the researcher used 55 sample. Based on matimatical sampling technique the researchers would use stratified sampling to create proportionality by guiding (Yamane.T. 1973) the following formula.

$N= N/1+N(e)^2 =9815/1+8915^x(0.5)^2 =383$

Ni = (ni /N) Ns where

Ni = number of ithKebeles of strata

ni = total numbers of population in the ithKebeles of strata

Ns = number of sample size that would be use each strata

N=Total number of population the three Keble's, there for

$N=k_1/TpN\times sample\ of kebele\ population$

Geber sub city 01 Keble $= (390\div 8915) \times 383 = 16$

Edgetbere Keble = $(460\div8915)\times383 = 19$

Edgetchora Keble = $(470\div8915)\times383 = 20$

$Ns=16+19+20=55$

The total sample size will be take for 55 Respondent

3.9 Tool of Data Collection

The necessary data would be gathered from primary sources and secondary sources. data was the most relevant item for any research. Hence, in order to get the relevant data for the study there must be tools. this study would primarily use: Survey questionnaire, in-depth interview, document analysis and observation as its data collection tools.

3.9.1 Primary Sources of Data

A. Survey questionnaire

The researcher could use both closed-ended and open-ended question. This is used to collect large amount of data in limited time from large number of participants which contains specific purposive. thus, open-ended questionnaire will be prepared for the target population. the total population as a sample from householder for questioner would took 55 respondents. the questioner prepares by English the researcher farther translate in to Amharic for important to communicate the respondents. the researcher would be sake the respondents smoothly essay, will clear and finally conclude by polite condition.

B. Key Informant Interview

Key informant interview was taken with selected informants to gate primary data regarding, purpose, factors of service quality and sustainability water supply. The interviews would be conducted by the researcher. the researchers would intensively took and record the interview. The key informant would be selected purpose fully. they are knowledgeable about the issue related with quality and sustainability of water supply as well as social conditions. generally, key Informant Interviews was conducted with knowledgeable persons in relation to the study subject. This includes both the supply and the demand side. However , more emphasis is given to the supply side. from water and sewerage office or water development office experts, heads to select one (1) from water users association heads or mangers to select one(1) from technicians, sub cities to select two (2) from town water and sanitation focal persons, health extension workers , public health practitioners/ specialists & Keble chairpersons and sub city mangers to select one (1) key informant respondents.

(C) Observation

The researchers used non participant observation by recording the event and remain passive as well as taking note. It was collected information directly go to the fill face to face contact direct to the events to be seeing. because direct observation means to be directly what the action to do. So, the researcher to find information real evidence. In this case the researchers would be feeling this way to knowing the the factors affect service quality and sustainability of water supply

institution how to give service for the society and what is the reaction of customer to the institution.

3.9.2 Secondary sources

Secondary data would be from different source like ,books ,journals, internet link and documented analysis and other documents that describe about the service quality and sustainability of water supply institution office by referring the material exist without contacting with respondents.

3.10 Method of Data Analysis

After data would be collected, the researchers would use both quantitative and qualitative method to analyzing the data. the data obtained from both primary and secondary sources would organized on basis of their similarities and characters. It would be processed through descriptive data analysis, it refers to produces for organizing, summarizing and describing qualitative data. for the quantitative method of data analysis, the researcher would use questionnaires to interpret in the form of tables, frequency and percentage.

3.11 Ethical Consideration

At the time of questionnaire and interview the researcher would be clear presentation of the topic of the research and questionnaire for the respondents. Following this the researcher respect and understanding the values, norms and point of view the respondents in the area of Wolkite Town. The researchers would be smoothly and wisely contact with respondents. Information would be collected from the volunteers and asking politely explanation of objectives and the significance the study and different concerned bodies in order to get more accurate information. Additionally, the culture and tradition of the study population would be respected. Finally at the time of data collection of confidentiality.

Chapter Four

4. Data presentation, Interpretation, and Analysis

This chapter deals with data analysis and interpretation about the factors that affects service quality and sustainability of water supply in wolkite town. Based on the collected data obtained from primary sources through questionnaires and interview, the data analysis and interpretation is based on 55 respondents of the questionnaires and interview form these 5 selected experts in the area of study. In this chapter collected data has been presented and analyzed through distribution and statically percentage

4.1back ground of respondent

Variables	**Item**	**N.O of respondent**	**%**
Age	Male	20	36.36
	Female	35	63.64
	Total	55	100
Sex	Below>18	6	10.91
	19-40	44	80
	41-65	5	9.09
	Above<65	-	-
	Total	55	100
Education status	Illiterate	11	20
	1-8	20	36.36
	9-12	8	14.35
	Diploma	8	14.54
	1st degree	6	14.55
	Total	55	100
Marital status	Single	49	34.54
	Married	30	54.55
	Divorce	4	7.27
	Widower	2	3.64
	Total	55	100
Family size	2-4	26	47.27
	5-8	27	49.59
	9-11	2	3.64
	12 and above	-	-
	50	55	100

Residence	Rural	8	14.54
	Urban	34	61.82
	Sub city	7	12.73
	Kebele	6	10.91
	Total	55	100

Source own survey 2019

4.2 age distribution of the respondents

As show in the above table(1) 20 (36.36%) of the respondents are male and the result total number of respondents. 35(63.64%) of respondents are female. So the study indicates that majority of respondents are female. Because responsibility of house is in hands of male than female, women are more exposed to the problems of water, and thus could provide information about service quality of water supply in wolkite town. And, female are more involved in affaires of water in town . Thus, we could get adequate data from both sexes.

4.3 Sex level distribution of respondent

As show in the above table(1) 6(10.91%) of the respondent are 0-18 year old ,44(80%) of the respondent are 19-40 years old. 5(9.09%) of the respondent are 41-65 year old. So this indicates that majority of the respondent are 18-44 year old. Because of this age groups are those who are married have family, children and live in the wolkite for long period of time town in addition to this age group are fertile so, they consume the service quality of water supply in wolkite town.

As result in the town this age group to showing above the table the specifically consumption of water demand very high because to use the different purpose in the house and this factors that affects water supply.

4.4 Educational Level of respondent

As shown in the above table(1), 11(20%) of respondents are illiterate, 20(36.36%) of respondent are primary school complete, 8(14.55%) of respondent are diploma, 8(14.55%) of respondent are BE degree, 8(14.55%) of respondents are illiterate. So that, the majority of respondents are complete primary school. It implies that most of our respondents are educated and indicates that they are more of primary school complete in town. Thus, they could have understanding about the problem we are investigating and enable us get the required data for the study.

As result the majority of respondents to finished the primary school this educated population have awareness about distribution of water supply in the town and participation in different level of water committee to improves of quality water distribution.

4.5 Marital status distribution of the respondents

As show in the above table(1), 19(34.54%) of respondent are single, 30(54.55%) of respondent are married, 4(7.27%) of respondent are divorced, 2(3.64) of respondent are Widower. So, the majority of respondents are married. Because of our respondents are married they consumed and use the town water supply and have enough knowledge of the town water situation by this way respondents are forwarded their view towards service quality of water supply evaluation.

As result the majority of respondents were married, had family and children the demands water supply very high consumption in town.

4.6 family size distribution of the respondents

As show in the above table(1), 26(47.27%) of respondent are family size (2-4), 27(49.09%) of respondent are family size (5-8), 2(3.64%) of respondent are family size (9-11, So, the majority of respondents are family size (5-8). therefore, this indicates are they consume large amount of water supply. As a result of in town majority of family size 5 up to 8 these filmy size the factor of water supply consumption is high.

4.7 Residence distribution the respondents

As show in the above table(1), 8(14.54) of respondent are live in rural, and 34(61.82) of respondent are live in urban, and 7(12.73) of respondent are live in sub city, and 6(10.91) of respondent are live in kebele, So, the majority of respondents are live in urban area. Because of the society to seek better service like education, infrastructure, living standard and the more consume water supply in urban area.

Table 2 levels of services quality of water supply

Item		
What are the levels of service quality of water supply in wolkite town?	Frequency	Percentage
High	4	7.27
Moderate	34	61.82
Low	17	30.91
Total	55	100%

Source, on own survey 2019

From the above table shows that response given by customers' respondent on level of service quality of water supply. Respondent are required to express their degree of level regarding of service quality 4(7.27%) of respondents are high and 34(61.82%) of respondents are moderate and 17(30.91%) of respondent are low. So, the majority of respondents are moderate or medium this implies that the service quality level of water is medium range that means neither high nor low.

According to interview in wolkite town, the service quality of water supply unmatched with regard to the increasing population numbers of town and the consuming capacity of water are moderate town. As a result, wolkite town water quality level medium. (Interview, 21/09/2011).

The results of the study show that the level of service quality water supply not satisfied community in town because of the distribution of service water supply are moderate

Table 3 response on the distribution of water in all season

Item Do you think the distribution of supply of water throughout of all season?	Frequency	Percentage
Yes	5	9.09
No	50	90.91
Total	55	100%

Source, own survey 2019

From the above table shows that 5(9.09%) of respondent said that the distribution of water is distributed all season, where as other 50(90.91%) of respondent are responded that not distribute in all season. This implies that the distribution of water is mostly not equally distributed in wolkite town. Then the access of water in town varies according to the line of distribution and also geography. Generally, most of respondents said that no water access regularly in town as a result of geographical inconvenience, poor infrastructure, irregular access of light which related to distribution of water. There are data from interview then interviewee said that "water in town is not regularly accessed by poor performance of water construction in town, pipe line broken down, and lack of good governance" (interview, 21/09/2011).

The results of the study show that water sources are not regularly accessible in this whole area in town due to geographical inconvenience which means the geographical style of land is not as much convenience. The slope of the land up and down and it is not flat therefore the movement of water regularly cannot be appropriate to accessible. In addition, the problem of the light permanently because of the lack of light management in the other ways when the power of

electricity cannot access the water supply not move from place to place then the resident not acquire water permanently. Due to this, the respondents answered in such away.

Table 4 response on main reason for breakdown of water supply

Item Do you think the main reason for breakdown of water supply in your area (in wolkite town)?	Frequency	Percentage
Exposed Lin	23	41.82
Old line	10	18.18
Poor maintenance	5	9.09
the interruption of electric	17	30.91
Total	55	100%

Source, on own survey 2019

In the above table shows that 23(41.82) of respondent are Exposed Lin, and 10(18.8%) of respondent responded that the old Line, and 5(9.09%) of respondent are poor maintenance operation, and 17(30.91%) of respondents said that the interruption of electricity power generation. From the above table it can be understand that the main case of break down water supply is Exposed Line operation.

In according to interview said that in wolkite town the main problem exposed line operation very obstacle because of the old line are used to oldest technology therefore, it more time consume until to change other technology to distribution water supply for community``(interview, 21/09/2011)

The results of the study show that, to increasing urban infrastructure the exposed line to difficult change the new technology one so, water supply is very difficult.

Table 5 response on the distribution of water in city

Item Do you think the water distribution of in city is fair from community to community?	Frequency	Percentage
Yes	20	36.36
No	35	63.64
Total	55	100%

Source, on own survey 2019

From the above table the respondent shows that 20(36.36%) of respondent are responded, it is fair from all community, and 35 (62.5%) of respondents are said that the water distribution not fair from one community to other community. From the above table the researchers understand that the distribution of water is not fairly prevalence. As result not community distribution of water supply equally in town one area to other area.

According to, observation in town water supply distribution community to community not faire by different cases of the town that are poor infrastructure, poor management, weak governance, old technology. So, the water consumption in community very low distribution supply.

Table 6 response on evaluate over all construction quality water supply

Item		
How do you evaluate over all construction quality of water supply scheme?	Frequency	Percentage
Good	16	29.09
Moderately	29	52.73
Low	10	18.18
Total	55	100%

Source, own survey 2019

from the above table the respondent show that 16(29.09%) of customer respondent responded that construction quality is good, and 29(52.73%) of customer respondent said construction quality is medium, and 10(18.18%) customer respondent said that construction quality is low. from the above table the researcher understand it the evaluation criteria of construction quality of water supply is moderate.

Well, in town, wolkite, the quality and accessibility of water unmatched with regard to the increasing population numbers of town and the consuming capacity of town. As a result, wolkite town are trade and investment center which require quality access of water are reduce (Interview, 21/09/2011).

The results of the study show that the water quality has some problems, like poor sanitation, poor infrastructure and poor sewerages. Even though the consuming capacity of town is high as a result of wolkite town is center trade and investment, the quality and access of water is not fair and balanced across the whole town. Similarly, the quality of water is not good because of poor management and other ineffective mechanisms of managing water supply.

Table 7 response on build water project

Item	Frequency	Percentage
Whose idea was it to build the project?		
The community	30	54.55
Local leaders	6	10.91
NGOs	3	5.54
Governmental offices	16	29.09
Total	55	100%

Source, own survey 2019

from the above table the respondent show that 30(54.55%) of respondent are community, and 6(10.55%) of respondent are Local leaders, and 3(5.54%) of respondent are NGOs, 16(29.09%) of respondent are governmental offices. The majority of respondents are community so, from this result indicates main decision maker on water project.

As result above the table show in town respondent the major decision making the idea of water project community because of the main affected water problem the society so, community have role for water project.

Table 8 response on site selection water project

Item	Frequency	Percentage
Whose idea was it to choose the site selection of the project?		
The community	20	36.36
Local leaders	8	14.55
NGOs	5	9.09
Governmental offices	22	40
Total	55	100%

Source, own survey 2019

from the above table the respondent show that 20(36.36%) of respondent are community, and 8(14.55%) of respondent are Local leaders, and 5(9.09%) of respondent are NGOs, 22(40%) of respondent are governmental offices. The majority of respondents are Governmental offices so, from this understand government primary decision maker on water project.

As a result for water project site selection the major decision making for community the government have key role in to suitable selection area the center to society.

Table 10 response on choose technology for water project

Item	Frequency	Percentage
Whose idea was it to choose the type/ technology of the project?		
The community	11	20
Local leaders	6	10.91
NGOs	7	12.73
Governmental offices	31	56.36
Total	55	100%

Source, own survey 2019

from the above table the respondent show that 11(20%) of respondent are community, and 6(10.91%) of respondent are Local leaders, and 7(12.73) of respondent are NGOs, 31(56.36%) of respondent are governmental offices. The majority of respondents are Governmental offices so, from this respondent survey the government part are primary choose technology on water project.

Table 11 response on problems with water service

Item	Frequency	Percentage
How severe are problems with water service in your community?		
High	39	79.1
Moderate	14	25.45
Low	2	3.64
Total	55	100%

Source, own survey 2019

above the table show that 39(79.1%) of respondent are High, and `14(25.45%) of respondent are moderate, and 2(3.64) of respondent are low. The majority of respondents are responds that problem with water service in community are High. Because 39(79.1%) respondents say high due to poor construction of pipe line, geography of wolkite town , and less protection and less conservation of water. The interview result is presented as follows.

According to interviews say about water problem is that the interruption of water in town are as results of poor technology, lack of sufficient technician, and lack good manager and further more over population, and stop of light in town are factors of interruption of water in town (Interview, 21/09/2011).

Thus, on the basis of the data, we can conclude that the water service problem in wolkite is because of poor construction of pipe line, geography, less protection and less conservation of

water, poor governance, lack of responsibility and interruption of Electric power usually which means when the power of light going on switch off there is no water movement due to the source of electric depend on large flow of water by moving power of light then interruption is for the rationale of above.

Table 12 response on participation overall project development

Item	Frequency	Percentage
What type of participation did you have in the overall project development?		
planning and management	6	10.91
Implementation	26	47.27
Utilization	15	27.27
all of the above	8	14.55
Total	55	100%

Source, own survey 2019

From the above table show that 6(10.91%) of respondent are planning and management, and 26(47.27%) of respondent are Implementation, and 15(27.27%) of respondent are utilization, and 8(14.55%) of respondents are all of the above. The major respondents are Implementation response on participation overall project development.

As result the major respondent responds that the overall water project participation in implementation process to support for water project development.

Table 13 response on members of total water committee

Item	Frequency	Percentage
How many women you think should be members of total water committee?		
0	6	10.91
1	6	10.91
2	20	36.36
3	13	23.64
4 and above	10	18.18
Total	55	100%

Source, own survey 2019

Above the table show that 6(10.91%) of respondent are `0`, and 6(10.91%) of respondents are `1`, and 20(36.36%) of respondents are `2`, and 13(23.64%) of respondents are `3`, and

10(18.18%) of respondents are `4`. So, the majority of respondents are ``2`` on member of total water committee. As this data indicates most women's are not to the member of in water committee because they have a lack of awareness, attitude and education.

as result to study this area it brings quality water service to give opportunity for women's participation in committee.

Table 14 response to reason that prevent from participating water committee

Item		
do you have the reason that prevent you and other women from participating in the water committee?	Frequency	Percentage
Yes	14	25.45
No	41	74.55
Total	55	100%

Source, own survey 2019

Above the table show that 14(25.45%) of respondent have the reason prevent from participation in water committee, because the respondent have a lack of experience , attitude education and awareness and 41(75.55%) of respondents they have no reason to prevent from in participation of water committee. So to understanding this data the majority of the respondent are to participated in water committee because they have better experience ,education, social attitude and awareness of the society. In addition to according observation wolkite town water service institution the hade office manager is women and other women are executive in office.

The interview result is presented as follows. With regard to the existence of committee for the collaborative activity, there are high amount of collaboration committee of in the water supply due to high integration of management, high attraction of private institution and also social service and as results of have good governance (Iterview,27/08/2010).

As result in a town water supply committee have the strong cooperation activates to distribution the quality water supply for the society.

CHAPTER FIVE
5. Conclusion and Recommendations

5.1 summary of finding

Based on the analysis and interpretation of data the major finding were stated as follows

Based on the analysis and interpretation of data the major finding were stated as follows majority of customer's respondents responded that level service quality of water supply is medium level and equally distributed to the whole community.

Majority of customers' respondents responded that the interruption of water is high and a case of breakdown of water supply is poor quality maintenance operation. customers respondents responded that the interruption of service quality water supply of dissatisfied. 68%of employee's respondents said that not enough tanker during accident and it is the majority factor of service quality of water supply.

Most of respondents of employees said that distribution of water by time limitations to satisfy the whole customers.

5.2 Conclusions

In this study, we have two basic objectives. The conclusion is drawn in accordance with the basic objectives. The first objective of the study is "to identify factor that affect service quality of water supply in wolkite town". In this regard, the results show that there are a number service quality of water supply problems, irregularities, unbalanced distribution of water services across the town, and the provision of service quality water supply limited for the society. What we can conclude from this study that service quality water supply is being delivered in wolkite town is not based on clear and well established systems.

Most of employees of the organization said that the major problems of binder service quality of water supply within the organization are administrative barrier, employees are not infested to help to your customer, not prompt service to customers due to lack of incentive and causal factors.

The second objective of the study is to assess the factor that affects the sustainability of water supply in wolkite town". In this regard, the results of construction of water supply systems would definitely increase the people with access to safe drinking water. The major factor identified from analysis is the involvement of women in the decision making process and in the town water user committee. In this study, the participation of women was greater in the functional water points. In some functional schemes there were two women members of a water committee. we pose that when women are more involved in the day to day operation of water points, these systems will be more sustainable. The conclusion is that The results agree with most of the literature (e.g. Gelar, 2008) that without community involvement the water supply system fail.

The institutional support of the water supply systems after construction was very weak. The wolkite town technicians or experts are small in number and have no capacity to cover all the water supply systems in the town.

The analysis of the data in this study area showed that communities or committees in the functional water points had more training. However, the overall training was very low.

One further factor identified in the study area was contribution of cash and labor during and after construction. In areas where the contribution of cash and labor were high, the sustainability was better.

5.2 Recommendation

Improving the existing water supply in the town both interims of quality, quantity, reliability and sustainability means upgrading the socioeconomic welfare of the people in the town. on the basic of the findings, the researchers have forwarded the following basic recommendations.

The organization should be to distribution the service quality and sustainability of water supply to use the chosen new technology for sustainable water development .The governments should establish a policy of coordination between community and stakeholders on how to work together and improve service quality and sustainability of water supply delivery.

It is good that the community participates in solving the problem of water supply. To facilitate this, the government should establish some important mechanisms. It a crucial that all the stakeholders participate in the improvement of water service delivery in wolkite town through working together, such as discussing, researching, and other related activities.

The distribution of water supply for sustainable to use society the government should to build or construct extra tanker in the town and the government responsive to the water costumer for emergency of the interruption of water town.

It is good that the government, in collaboration with the community, should have to facilitate infrastructure and give technical, other financial supports for service quality and sustainably of water supply in wolkite town.

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7. APDEX

Wolkite University

College of social science and humanities

Department of governance and development studies

Dear respondent

First of all we would like to extend thanks to your hart full cooperation and the time you spent to fill up this questionnaire. The main objective of this questionnaire is to collecting the information regarding assessment of factor that affecting service quality and sustainability of water supply in wolkite town. Please answer all items objectively. The researchers assure you that the information provides will be kept confidential and will be used only for an academic purpose. Hence, we would like to thank you I advance for your valuable time. Thank you for cooperation

Instruction

Δ No need writing your name

Δ put a tick (√) for your answer

Δ Write down appropriate answer in the blank space

1.1 soci - demographic character

1. Gender: - A. Male ☐ B. Female ☐

2. Age: - A. below18 ☐ B. 18-40 ☐ C. 41- 65☐ D. above 65 ☐

3. Education level: - A. illiterate☐ B. (1-8) ☐ C. Secondary education (9-12) ☐ D. diploma☐ E. Degree ☐

Master and above ☐

4. Marital status: - A. Single ☐ B. Married ☐ C. Divorced ☐ Widower ☐

5.Family size A. 0-4☐ B. 5-8☐ C. 9-11☐ D. above 12☐

6. Residence: - A. rural☐ B. urban ☐ Sub City☐ D. Keble☐

1.2 Questionnaire for assess factor affecting service quality of water supply.

1. What are the levels of service quality of water supply in wolkite town?

A. Very high ☐ B. high ☐ C. moderately ☐ D. Low☐ E. very low □

2. Do you think the distribution of supply of water throughout of all season? A. Yes ☐ B. No☐

3. Do you think the main reason for breakdown of water supply in your area (in wolkite town)?

A. Exposed Lin ☐ B. Old line □ C. Poor maintenance ☐ D. in the interruption of electric ☐

4. Do you think the water distribution of in city is fair from community to community?

A. Yes ☐ B. No ☐

5. How do you evaluate over all construction quality of water supply scheme?

A. Very good ☐ B. Good ☐ C. Moderately □ D. low □

1.3 Questionnaire for assess factor affecting sustainability of water supply

1. Whose idea was it to build the project? A. The community ☐ B. Local leaders☐ C. NGOs☐ D. Governmental offices ☐ E. other

2. Whose idea was it to choose the site selection of the project? a. The community☐ b. Local leaders☐ c. NGOs☐ d. Governmental offices ☐ e. other organization

3. Whose idea was it to choose the type/ technology of the project? a. The community ☐ b. Local leaders☐ c. NGOs☐ d. Governmental offices☐ e. other

4. How severe are problems with water service in your community? a. low ☐ b. fair☐ c. ☐ strong☐ d. very strong ☐ e. No problem ☐

1.4 Identification of type of Participation of beneficiaries and Women

5. What type of participation did you have in the overall project development?

a. planning and management☐ b. implementation☐ c. utilization ☐ d. all of the above ☐ e. None

6. How many women you think should be members of total water committee? Circle the number of women. a. 0☐ b. 1☐ c. 2☐ d. 3☐ e. 4☐ f. 5☐ g. 6☐ h. above 6

1.5 Questionnaire for Interview guideline

1. what do you think to give betterment of service quality water supply for future
2. Do you think community to satisfied with the level of water supply?
3. What do you recommend for sustainable use of the water supply scheme?
4. How do you the organization to give quality service related to water supply in wolkite town?
5. How do you community to participation building water project?