

MANUAL FOR THE MANAGEMENT OF  
VILLAGE WATER SUPPLY SCHEMES IN THE  
DIOCESE OF KUMBO  
NORTH WEST REGION OF CAMEROON



Workshop Facilitated by  
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## INTRODUCTION

This training manual is intended to help train members of Water Management Committees within the framework of the 4<sup>th</sup> phase of Caritas village pipe borne water supply programme on water systems management and water safety measures 2017 - 2020 in the Diocese of Kumbo (PROJECT NO. 121-014-1040 ZG).

The production of this manual was led by Gamnje Tansah John from the Organization for Sustainable Rural Infrastructure (OSRI) with contribution from the Vocational Centre for International Development (VCID).

A water supply scheme once constructed serves its purpose only when there is regular operation and maintenance. When the water scheme is poorly operated or maintained it becomes a big waste to the community. Caretaking of the water scheme also means ensuring that the structures are in good condition and the system is expected to function well with uninterrupted flow of clean drinking water. This training was essential to ensuring the sustainability of the water systems. It is also in the interest of CARITAS that the training of the management committees be an integral part of the programme. As successful community management requires that clear ownership of the water systems be defined from the initial stage. Their involvement and training are all ingredients of ownership and responsibility.

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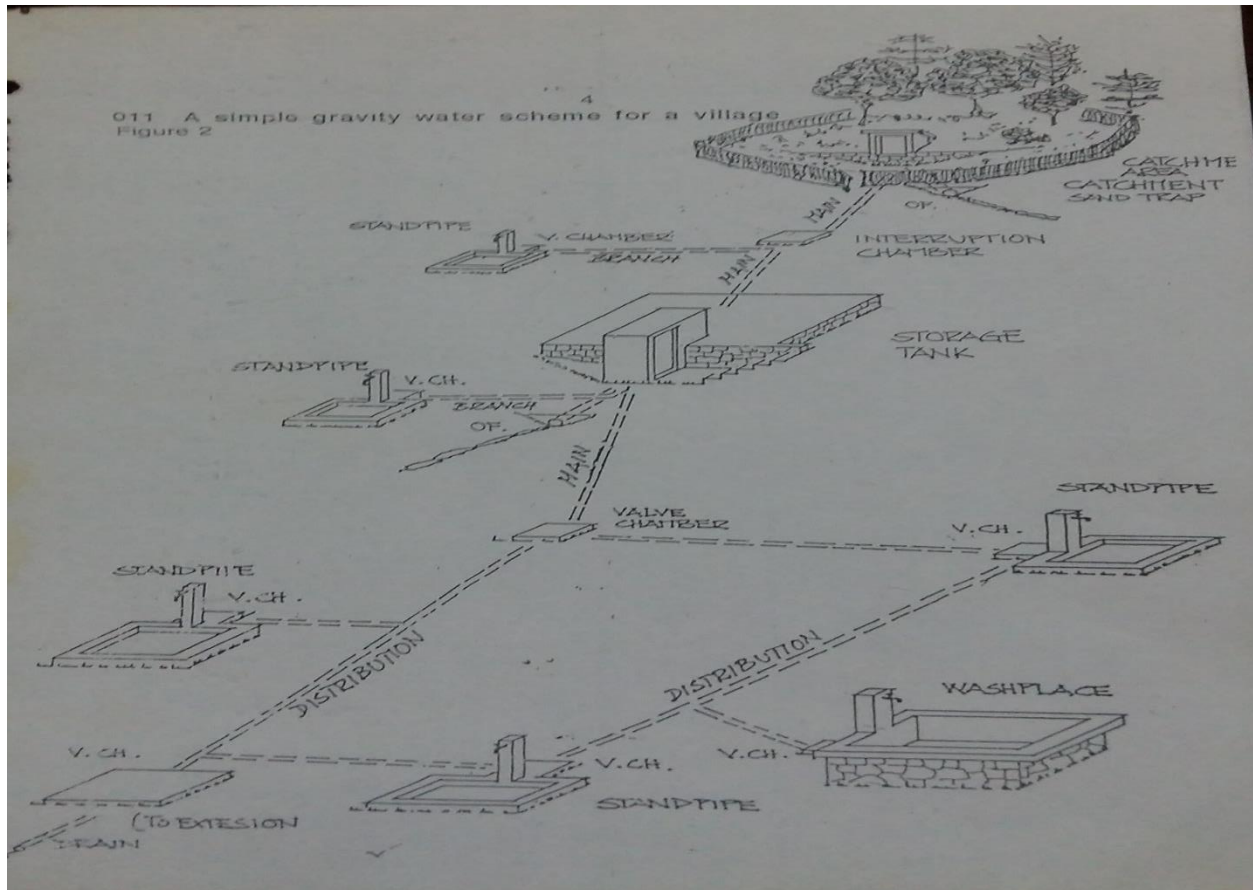
## TABLE OF CONTENT

Introduction.....	1
Table of content.....	2
1. LAYOUT OF A VILLAGE GRAVITY WATER SUPPLY SCHEME.....	4
2. CONCEPT OF OPERATION AND MAINTENANCE .....	4
3. MONITORING OF O&M .....	6
3.1 Definition .....	6
3.2. Description of Routine Operation and Maintenance .....	6
<b>4. SAFETY MEASURES (WATER QUALITY AND PUBLIC HEALTH).....</b>	<b>7</b>
4.1 Introduction .....	7
4.2 Possible Problems and their Control measures.....	8
4.3Some Hygiene Practices.....	12
5. WATER MANAGEMENT COMMITTEE.....	12
5.1 What is management? .....	12
5.2 What this committee is and why? .....	13
5.3 Functions of a Water Management Committee .....	13
6. FINANCIAL CONTRIBUTION FOR MAINTENANCE .....	14
6.1 Why should users or community members pay? .....	14
6.2 Mobilisation of Funds .....	14
6.3 Fund raising .....	15
6.4 Management of funds (Simple Bookkeeping) .....	16
7. WATER CATCHMENT PROTECTION .....	17
7.1 Introduction .....	17
8. CONFLICT MANAGEMENT .....	18
8.1 Types of conflicts and how to manage them .....	19
8.2 Ways of dealing with conflicts .....	20
9. WASH and HIV/AIDS.....	20
Annexes: .....	23

I: Sample Internal Rules & Regulations of a WMC.....	21
II: Gravity Water Scheme Monitoring Form .....	30
III: Photos of Some Water Supply Components and Hygiene Practices .....	36
IV: Borehole Fitted with a Hand Pump .....	40

## LAYOUT OF A VILLAGE GRAVITY WATER SUPPLY SCHEME

This consists of the water catchment and source intake, the collection chamber, the sedimentation tank, the filtration tank, the storage tank, the pipeline and the stand taps. There are other structures such as control, aeration and washout chambers along the pipeline system. All have their different functions and must be designed as such.



Layout of a village gravity water scheme (Source: HELVETAS Cameroon)

## CONCEPT OF OPERATION AND MAINTENANCE

Operation and maintenance is the process of opening and closing of various components (service pipes, stand taps, valves, etc.) of the system and making sure broken or nonfunctional parts are repaired. It also includes hygiene handling and use of water.

Maintenance should be seen not only as repair work, but also as a way of preventing the breakdown of equipment in the first place. There are three types of maintenance;

a) Preventive maintenance,

This type prevents breakdowns through good operation procedures, routine inspection and checking, and timely servicing of equipment and facilities. Preventive maintenance includes simple activities such as;

- Replacing a washer in a dripping tap,
- Cleaning water catchment by removing leaves, mud, silt, etc.
- Flushing the pipeline from time to time,
- Checking cracks in the storage tank, sedimentation and filtration tanks,
- Clearing of pipeline,
- Cleaning out the soak-away pits and surroundings of the stand taps.

b) Corrective maintenance,

The routine minor repair of equipment and facilities e.g. broken pipe, crack on walls of the tank.

c) Crises or emergency maintenance.

Major repair work when the system as a whole is affected e.g. damaged water catchment or pipeline. Correct operation practices and preventive maintenance reduces the need for both corrective and crises or emergency maintenance e.g.

A poorly managed stand tap will have the following problems;

I. Technical problems:

- The tap is broken and in need of repair
- The tap has been stolen
- The drainage channel is blocked
- The soak-away pits need repair and stones have been taken away
- Caretaker refuses to do his job

II. Managerial problems:

- Nobody has taken responsibility for the stand taps
- Lack of motivation to look after the stand taps
- Users lack basic skills for maintenance and repairs
- Children are undisciplined and play around the taps

- Stray animals excretes around stand taps

III. Community problems:

- No one looking after the system
- No materials for repairs
- No water levy
- No arrangement to contact water agency for advice

The benefits of proper operation and maintenance

- Reduced breakdowns,
- Time saving
- Reduced water charges
- Improved health
- Less dependency on outside assistance

## MONITORING OF O&M

### Definition

Monitoring means – regular inspection of activities to be performed within the water resources management.

- Evaluation – means to compare the real outcomes after implementation
- Make participants understand that monitoring and evaluation need to be done from time to time and should be done on a regular basis. Find below how some O+M activities are being monitored:

### Description of Routine Operation and Maintenance

Period	Description of component
Daily	<b>Stand tap:</b> <ul style="list-style-type: none"> <li>❖ Unlock taps and open the valve on the service line</li> <li>❖ Check that the tap operates correctly</li> <li>❖ Check that the flow of water is normal</li> <li>❖ Attend to any dripping tap</li> <li>❖ Attend to any leaking tap</li> <li>❖ Clean the stand tap platform and surrounding and drainage</li> <li>❖ Inspect stand tap structure and repair any crack</li> </ul>

Weekly	<b>Storage tank:</b> <ul style="list-style-type: none"> <li>❖ Check leaks</li> <li>❖ Check if overflow is in good condition</li> <li>❖ Check if valves are in good condition</li> <li>❖ Check if water is flowing into the storage tank at the required rate</li> <li>❖ Walk along the pipeline route and distribution for leaks</li> <li>❖ Check valves are not leaking</li> </ul>
Monthly	Collect water levies from users
yearly	<ul style="list-style-type: none"> <li>❖ Inspect spring box or intake</li> <li>❖ Drain the storage tank</li> <li>❖ Repair any damage to the storage tank</li> <li>❖ Plaster and make good any crack on the walls and floor of the storage tank</li> <li>❖ Check the operation of valves, repair or replace parts as necessary</li> <li>❖ Open washout to flush the pipeline</li> <li>❖ Check air release valves operate correctly</li> <li>❖ In the dry season remove soak-away stones and clean soak-away pits and replace back</li> </ul>
Periodic	<ul style="list-style-type: none"> <li>❖ Repair pipeline leaks, taps and valves as necessary</li> <li>❖ Inspect the pipeline after heavy rain and control erosion and other damage</li> </ul>

## SAFETY MEASURES (WATER QUALITY AND PUBLIC HEALTH)

### Introduction

The monitoring of a drinking water scheme is the continuous monitoring of public health along with vigilant assessment and control of safe potable water supply scheme. Safe potable water is the first step to promoting good health of the community. Experience has shown that community health and water quality is directly related to each other and an improvement of drinking water quality is followed by an improvement in the community's health. Water quality management and surveillance practices ensure safe water supply to the consumers.

A better understanding would be to ask about the **safety measures** in the management of a water supply scheme. Safety measure is the process by which risk can be reduced in the contamination of water. And **safety measures** can also be explained as the application of **hygiene and sanitation** practices in a water supply scheme. For a successful implementation of the safety measures, a committee needs to be put in place. Sometimes, this could be part of the Water Management Committee (WMC) or where there is a strong Village Development Association, it could be handled



by the hygiene and sanitation committee of this association. For effective implementation, the committee must stage a walk from the source through the system to the stand taps and at household level. In this process, the following questions are necessary to be answered;

### Possible Problems and their Control measures

#### At the source:

- Is the source protected by a strong fence to prevent animals from entering?
- Is the surrounding clean?
- Are animals or humans prevented from drinking water/defecating or leaving garbage around the source?
- Are there latrines or seepage from latrines above the source?
- Do you have cow dungs or remains from poultry and houses above the source?
- Are people prevented from bathing, laundry and washing of vehicles at the source?
- Is there a sign board indicating to the public that this is a drinking source, keep it clean?

#### Control measures at the source:

- ❖ Make a fence
- ❖ Improve on general drainage,
- ❖ Avoid the location of latrines close to the source,
- ❖ Avoid farming and application of chemicals,
- ❖ Avoid bathing and laundry within the source-intake,
- ❖ Avoid open defecation,
- ❖ In case of a spring source introduce an infiltration ditch or drainage to prevent runoff
- ❖ Consider source conservation measures, e.g. to plant indigenous trees and grass to vegetate the area that may lead to increasing ground water recharge.

#### At the Sedimentation tank:

- Is the tank in good condition and does it need repairs or rehabilitation?
- Is the pipe from the source in good condition?
- Does the water from the source enter the sedimentation from the top?

- Does the sedimentation tank has a cover?
- Is the sedimentation tank correctly designed and functioning with the appropriate filter materials?
- Is the sedimentation tank cleaned at least once every three months?
- ❖ Control measures at the sedimentation tank:
- ❖ Check and repair if required
- ❖ Check the pipe from the source and repair as required
- ❖ Check the tank cover and repair as required
- ❖ Drain or empty the tank periodically (three months) and clean out all sediments,
- ❖ Clean the walls, floor and pipes,
- ❖ Keep the surrounding clean

#### **At the treatment station (slow sand/gravel filtration tank)**

- Is the tank in good condition and does it need repairs or rehabilitation?
- Is the pipe from the sedimentation tank in good condition?
- Does the water from the sedimentation tank enters the treatment station in the rightful direction? (From the top for slow sand filters and from the bottom for up-flow gravel filters).
- Is the treatment station tank has protected?
- Is the tank correctly designed and functioning with the appropriate filter materials?
- Is the treatment tank cleaned at least once every three months?

#### **Control measures at the treatment station:**

- ❖ Check and repair if required
- ❖ Check the pipe from the sedimentation tank and repair as required
- ❖ Check if treatment tank is protected and repair as required
- ❖ Keep the surrounding clean
- ❖ Clean the heavy deposit on the sand bed and replace the sand and flush the gravel filters every three months,

- ❖ Check and clean the valves and cover slabs

**At the storage tank:**

- Is the storage tank in good condition or does it require any repair?
- Is the pipe from the treatment station in good condition?
- Does the storage tank has a cover?
- Is the storage tank free from dirt/sediments and water clear?
- Is the storage tank clean at least every three months?
- Does the storage tank have valves at the inlet and outlet so that chlorination is possible if desired?

**Control measures at the storage tank:**

- ❖ Check tank and repair as required
- ❖ Check the pipe from treatment tank or sedimentation tank and repair as required
- ❖ Check the tank cover and repair as required
- ❖ Check if the water is clear and the tank free from dirt/sediments
- ❖ Clean the tank at least once in three months
- ❖ Clean the walls, floor and pipes,
- ❖ Keep the surrounding clean
- ❖ Chlorinate if necessary (This must be done under strict advice and supervision of a competent authority or consultant engaged for this purpose).

**On the pipeline:**

- Are pipes in good conditions and free from leaks?
- Are joints and valves in good condition and free from leaks?
- Is the area around pipes free from animal fecal matter and garbage?

**Control measures on the pipeline:**

- ❖ Check pipes for leaks and repair as required

- ❖ Inspect the pipeline track and clean as required
- ❖ Check joints and valves and repair as required
- ❖ Open all air-valves one after the other after closing and opening
- ❖ Flush all washout valves one after the other when cleaning the pipeline,
- ❖ If required disinfect the entire pipeline

**At the stand taps:**

- Is the surroundings of all stand taps clean?
- Are there leaks or worn-out taps that allows water flowing throughout?
- Are villagers misusing the taps?
- Is the surrounding of taps clean?

**Control measures at the stand taps:**

- ❖ Check and clean the surrounding
- ❖ Wash hands and containers before collection
- ❖ Avoid washing of feet,
- ❖ Avoid drinking directly from the tap,
- ❖ Avoid washing of food stuffs
- ❖ Avoid collecting and transporting water in open containers
- ❖ Do not leave taps running unattended to

**At household storage and personal hygiene:**

- Is the storage container cleaned daily before usage?
- Does the container have a cover?
- Is there a clean ladle to scoop water before drinking?
- Do households practice hand washing with soap?

**Control measures for storage and personal hygiene**

- ❖ Check if the water is properly stored, avoid storing water directly on the ground/floor

- ❖ Avoid drinking directly from the scooping cup
- ❖ Check on hand washing practices

### Some Hygiene Practices



**Bad practice of washing hands**



**Good practice of washing hands**

### WATER MANAGEMENT COMMITTEE

#### What is management?

Management consists of organizing, planning, controlling, and directing an organization's resources in order to achieve the objectives of the organization. In our context, the Water Management Committee is responsible for organizing or mobilizing community members to see the need for the upkeep of the entire water supply scheme. In the course of this; community members see the need to carry out certain activities and contributing funds for the management of the water scheme.

Also, in this sector the phrase; “Water Management Committee” is frequently used during the post construction phase of a project and “Project Committee” during the construction phase. This can be understood that, community members give the mandate to an elected body amongst them to carry out a defined project and after completion the mandate is over. They now have the

responsibility to elect another committee to carry out the maintenance or the management of the completed water scheme and if the members of that project committee worked satisfactorily, then they could be voted back as the management committee.

During the workshop, both cases were highlighted as some communities are about to start construction work on their projects and others ongoing and few were undergoing rehabilitation works. However, this manual will dwell more on managing the completed water scheme where the following phrase will be frequently used; “Water Management Committee” (WMC).

### What this committee is and why?

This committee is made up of a limited number of active members (often there may be up to 15 members but can also be fewer depending on the size of the scheme and community) elected by a general assembly made up of all the users; it is then divided into technical commissions such as *finance, hygiene and sanitation, executive committees* for effective and efficient management.

### Function of a Water Management Committee

The main function of a water committee is to manage the community water system: by overseeing day-to-day operations and setting policies, such as whether and how much to charge for usage to cover future maintenance costs. Water management committees also promote health and sanitation education in the community by passing on the knowledge members gained during trainings, as part of project implementation. The role of a water committee extends beyond mere management and logistics. It also serves to elevate the position of women within the community, as we require the composition of the committee be at least 50 % female.

## FINANCIAL CONTRIBUTION FOR MAINTENANCE

### Why should users or community members pay?

Water is a free gift from God where ever you find it, but if you require some comfort in acquiring this gift, it is no longer free because it is not the will of God. It becomes an economic good, therefore you have to pay for. As anything made by man cannot be forever, you need maintenance

and this requires costs which must be made available. Users or community members are obliged to contribute and pay for maintenance costs.

### Mobilisation of Funds

The management of a water supply results in costs to the community. Communities are the managers or owners of the new water supply scheme and should therefore assume all the responsibilities accompanying that role. The issue of developing long-term maintenance capability at community level has become a priority under the structure of community ownership. Sustaining water improvement, maintaining the systems, results in costs to the community. It means a community must pay something for the initial construction and in most cases a partial contribution of the overall cost of the project. Specific task of the finance committee includes the following:

- ❖ Preparing a budget for the operation and maintenance
- ❖ Organising fund raising activities
- ❖ Keeping accounts of income and expenses
- ❖ Monitoring availability of funds (cash flow)
- ❖ Reporting to the water committee and the community on the status and use of funds
- ❖ Opening bank account and making deposits and withdrawals as required.

The next question would be how to raise the funds? This probably is the most important and the most difficult task for the water committee. The following different ways exist to raise money and collect fees from water users.

- ❖ Annual (twice yearly or quarterly) house-to-house fee collection by the committee members
- ❖ Setting aside days and places for users to pay water levies to the finance committee
- ❖ Small monthly or weekly amounts may be easier to pay than bi-annual or even monthly.

### Fund raising

**Example of an annual rate for maintenance (Taxable population of 600 inhabitants)**

The annual rate to be paid to the Development Association per person is 2,000FCFA. The percentage given for maintenance is 20% per year. When you calculate 20% of 2,000FCFA is 400FCFA per person for a year. Therefore the yearly amount for maintenance committee given by the Development Association is 400FCFA x 600 persons is 240,000FCFA. The 240,000FCFA is now the maintenance budget for the year. This amount is paid to the maintenance committee.

1. Village without a Development Association can organise activities within the year to raise fund, such as dances, donations, levies etc,

Example: A levy of 500FCFA per year is collected from every male and female in the village as maintenance fee. With 300 persons in the village, the maintenance fee will be 300 persons x 500FCFA which is 150,000FCFA. This money is collected by the finance group of the committee at fixed periods, say twice a year.

2. Water Day: A village can organise a special day of the year only to collect money for the water in the village, calling it Water Day. All villagers should be educated to know the importance of this day.
3. Private Connections: Every individual, households, institutions etc. using water privately shall pay a token fee every year to be used in maintaining the whole water system.

**Example:**

❖ Schools with one stand tap	= 5,000 FCFA/year
❖ Schools with WCs etc.	= 10,000
❖ Health Centre with appliances	= 10,000
❖ Hotels with 5 to 10 rooms	= 15,000
❖ Farms using water	= 10,000
❖ Individual houses with appliances	= 5,000
❖ Mission yards	= 5,000

The finance group of the water committee calculates the rates and ask the consumers to pay the various amounts at a given time of the year. The maintenance fee shall be fixed according to the maintenance regulations.



## Management of funds (Simple Bookkeeping)

### a) Ledger for water levy (Income)

Date	Name	Amount	Total amount
01.01.2018	Alex Ngwa	5,000	5,000
	Babila James	5,000	10,000
	Mariana Mujip	2,500	12,500
03.01.2018	Paul Ngande	5, 000	17,500
	Mbinkar Geoge	5,000	22,500
04.01.2018	Josephine Mban	2,500	25,000
	John Ngai	5,000	30,000
10.01.2018	Ndinga Ngwa	5,000	35,000
	Godwin Ngoh	5,000	40,000
	Delphine Ngun	2,500	42,500
20.01.2018	Peter Wengoh	5, 000	47,500
	Teddy Geoge	5,000	52,500
025.01.2018	Josephine Tembong	2,500	55,000

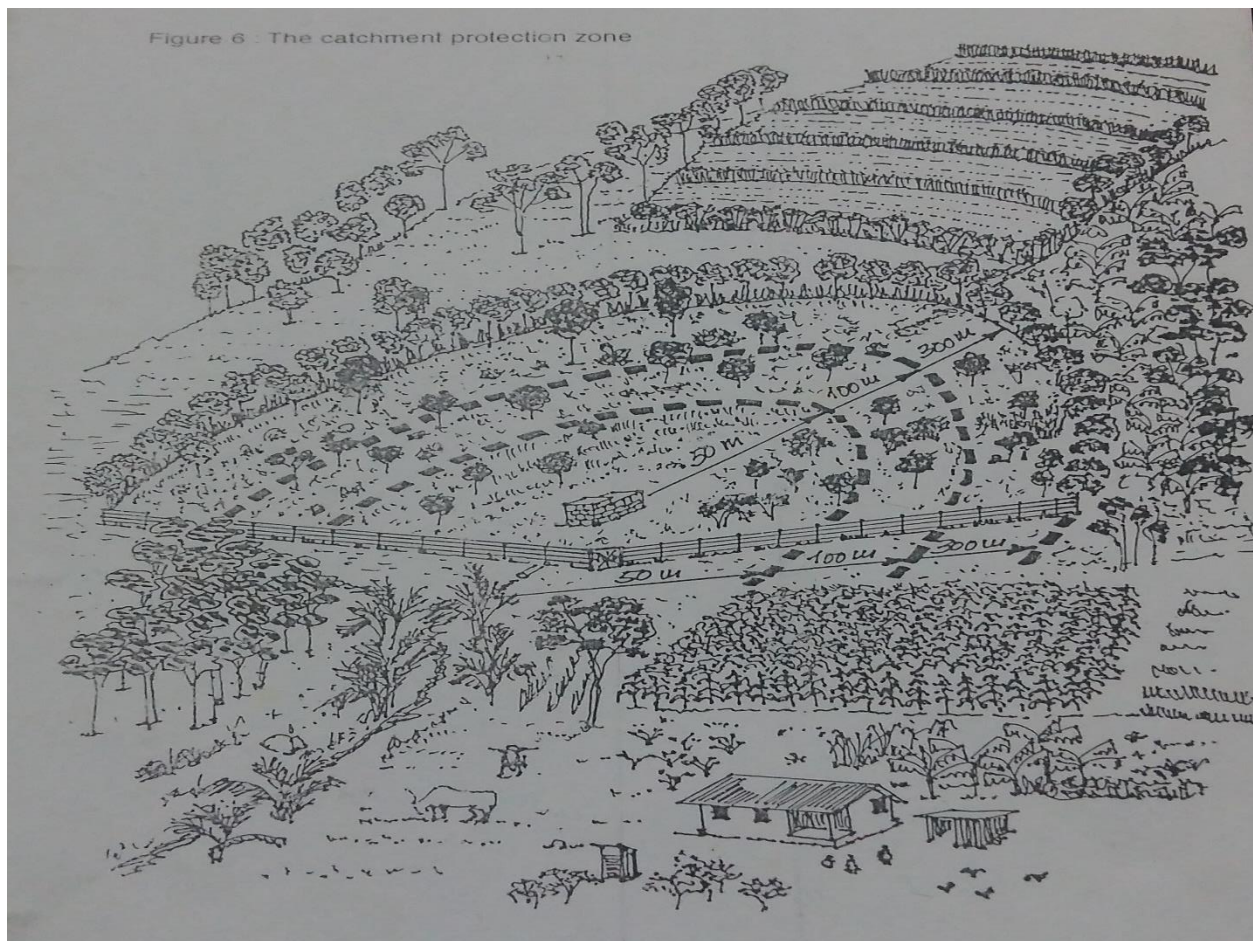
### b) Ledger Expenditure

Date	Designation	Qty	Amount	Total
19.01.2018	Purchased materials and spare parts			
	❖ Head taps at 4000Frs and used at quarter 4	5	20,000	20,000
	❖ ¾ inch PVC pipe at 2500F and used at the new stand tap	2	5,000	5,000
	❖ 2inch Stop cock at 10,000F used for the repair of the damaged valve at sedimentation tank	1	10,000	10,000
	❖ Gum at 3,000	1	3,000	3,000
03.02.2018	❖ Cement at 4,500	1	4,500	4,500
<b>Total</b>				<b>42,500</b>

## WATER CATCHMENT PROTECTION

### Introduction

A water catchment is always referred to as the heart of the overall water scheme. The huge investment after the source-intake located at the water catchment such as the sedimentation, treatment station, storage tank, the pipeline and stand taps would be a waste of resources if the catchment does not produce sufficient water quantity as well as the quality.



*An example of a good water catchment (Source: HELVETAS Cameroon)*

Basically catchment protection requires about 8 steps for its realization.

- a) **Preparation:** You need to state the objectives of catchment protection and where it has to be located as well as the activities to be carried. Why catchment protection? The catchment area need to be enclosed in order to;

- ❖ Maintain good vegetation,
  - ❖ Avoid farming and application of chemicals
  - ❖ Avoid deforestation
- b) **Sensitization:** You have to identify the different stakeholders concern and organize meetings for information and action.
  - c) **Feasibility study:** Involve experts at this stage to carry out detailed investigations of various activities and costs.
  - d) **Presentation of water catchment protection plan:** After detailed studies have been carried out a restitution workshop should be organized to inform stakeholders of the outcome as well as to integrate their inputs into the project design
  - e) **Land demarcation:** The object here is to obtain a land title in the name of the community to avoid future encroachment.
  - f) **Implementation of water catchment protection:** They have to plant pillars according to the demarcation, and construct a fence and tree planting.
  - g) **Monitoring:** The activities must be monitored to see its implementation is in line with the feasibility studies.
  - h) **Operation and maintenance:** Fire tracing is necessary especially at the beginning of the dry season to prevent bush fire. Broken sticks on the fence has to be replaced and same with trees planted that are not doing well. Check that there is no farming, grazing or the construction of toilets or houses.

## CONFLICT MANAGEMENT

Water Management Committee members have to make sure that they have good working relations between them and the community they work for. This is because without good relations, it will be difficult getting maximum cooperation from the community members for activities related to water, hygiene and sanitation.

## Types of conflicts and how to manage them

There are different types of conflict WMC members may experience while doing their work in the community.

### a) Within the community

These happen when;

- ❖ Certain members of the community feel that they are left out in decision making
- ❖ People are not well informed
- ❖ The Chairperson makes all decision

### b) Between the WMC and the community

These happen when;

- ❖ There is no cooperation between local leaders and the WMC
- ❖ Community members do not understand why they should contribute to the maintenance fund
- ❖ Committee members do not account regularly how the collected funds are spent
- ❖ It is time to organize communal labour

### c) Between community members (e.g people of different religious or political opinion or between leaders and a section of the community)

These happen when;

- ❖ There is a dispute between some indigenous community members and migrants
- ❖ There is closed mind in accepting people of different opinions or different religion
- ❖ Land owners change their minds about placing facilities on their land
- ❖ Community members who have contributed want to over influence the location of water facilities

## Ways of dealing with conflicts

Conflicts will always arise among communities. It is important to be able to manage them when they arise. If WMC members do not want to deal with them when they arise, they may end up creating more problems for the entire community. In dealing with the conflicts, it is important to:

- ❖ Recognize that there is a problem; do not ignore or tell people that is no problem
- ❖ Find out the causes of the problem, what happen, who did what, and what could the action lead to
- ❖ State the sides in the argument and then allow them in conflict to explain their position
- ❖ If possible get the conflicting parties and some neutral persons to look at the strength and the weaknesses of each position and come to an agreement (try to create a situation where there is no, loser)
- ❖ Summarize conclusion and get the conflicting parties to commit themselves to what was agreed upon

## WASH and HIV/AIDS

### Why WASH matters for People Living With HIV/AIDS (PLWHA)

- ☞ Diarrhea affects 90% of people living with HIV and AIDS, significant morbidity and mortality
- ☞ Diarrheal disease reduces antiretroviral absorption
- ☞ Diarrhea reduces absorption of nutrients
- ☞ Burden on caregivers in clinics and at home
- ☞ Cause of humiliation and lower quality of life
- ☞ People with HIV/AIDS have greater water needs

### Treating and Safely Storing Drinking Water

- ☞ Treatment and safe storage of drinking water at point of use reduced the risk of diarrhea by 30–40% (USAID 2004);
- ☞ Reduces severity of diarrhea in PLWHA by 35% (Lule et al. 2005)





Treated water ready for use



Water collection containers



Household member using treated water



Hand washing with soap

### Hand washing with soap

- ☞ Hand washing can reduce the risk of diarrhea by 42-44% (Curtis et al. 2003)
- ☞ Presence of soap in PLHIV households was associated with reduced number of days of diarrhea (Lule et al. 2005)

## Sanitation

- ☞ Improvements in excreta disposal reduce diarrheal morbidity by 22%
- ☞ Presence of latrine was associated with 31% reduced diarrhea and 37% reduced number of days ill

## Some key facts

FLUID	KEY POINT
Urine & faeces	HIV has never been isolated in urine or faeces. (Water Environment Federation, 2000)
	Urine and faeces quickly (in 1 hr) diminish infectivity of any HIV present. (Moore BE, 1993; Water Environment Federation, 2000)
Menstrual blood	Menstrual blood of HIV+ women may contain virus at a higher load than regular blood (Reichelderfer PS et al, 2000)
Waste water	HIV infected blood introduced into de-chlorinated tap water had no detectable virus after 5 mins (Moore BE, 1993)

## Some challenges for the future

- ☞ WASH should be incorporated more systematically into other areas of HIV as noted
- ☞ Water and sanitation programs need more support to incorporate HIV considerations
- ☞ Water collection is risky...and can facilitate HIV transmission among women
- ☞ Financing for WASH – HIV integration is limited .. But it doesn't take a 'whole lot' to integrate.

**ANNEX: I SAMPLE INTERNAL RULES & REGULATIONS OF A WATER MANAGEMENT COMMITTEE (WMC)**

**ARTICLE 1: PREAMBLE**

The purpose of this internal rules and regulations is to provide guidelines on which the collaboration of local water managers (WMC), local water technicians (caretakers) and water users (community) is based.

**ARTICLE 2: DEFINITION OF WMC**

This is a group of people with a constituted executive elected democratically, from the community in a general assembly meeting, for a period of time to be responsible for the day-to-day management of the community water supply scheme.

**ARTICLE 3.1: NAME OF THE WMC**

It shall be called, the ..... Water Management Committee.

**ARTICLE 3.2: MOTTO**

Water for Life

**ARTICLE 4.1: ORGANISATION**

The governing body of the ..... Village water supply scheme shall be as follows:

- (a) The General Assembly.
- (b) The Water Management Executive.
- (c) Quarter Management Committee.

**4.2: GENERAL ASSEMBLY**

- a) It is the supreme authority of the ..... village Water supply scheme.
- b) It is made up of the entire village.
- c) Approves the annual budget of the ..... WMC.
- d) Elects the WMC Executive.
- e) Approves fund raising activities for the ..... Village water supply scheme.
- f) Can amend the internal rules and regulations if need be.
- g) It shall meet four (4) times in a year.



- h) The agenda shall be drawn up by the president in collaboration with the WMC Executive and shall be approved by the general assembly.

## **ARTICLE 5: WATER MANAGEMENT COMMITTEE EXECUTIVE**

### **5.1: MANDATE OF THE WMC**

They shall be democratically elected for a period of two (2) years renewable once. Liabilities incurred while performing the duties of the WMC may be reimbursed if accompanied by a receipt.

### **5.2: COMPOSITION**

The ..... WMC shall be made up of ..... Members with the following executive positions:

- 1) President
- 2) Vice President
- 3) Secretary
- 4) Vice Secretary
- 5) Treasurer
- 6) Financial Secretary
- 7) Publicity Secretary
- 8) Advisers (1)
- 9) Members (2)

### **5.3: ROLES AND FUNCTIONS OF WMC**

- a) It is the management organ of the.....village water supply scheme.
- b) Represents the ..... water supply scheme in its relationship with the administration and donor organisations.
- c) It may initiate projects, which are beneficial to the water supply scheme.
- d) Employs and pays or compensate the caretaker
- e) Controls the activities of the caretaker
- f) Facilitates the training of the caretaker.
- g) Executes decisions taken by the general assembly
- h) Ensures that the population attend seminars and workshops on water matters.
- i) Study and approve applications for private connections.

- j) Organises and coordinates all activities of the water supply scheme and reports to the general assembly.
- k) Organises community work and ensures that everybody participates and report defaulters to the traditional council, to the council and then to the administration.
- l) Collects water rates and levies.
- m) The WMC shall open a Bank or Credit Union account with three signatories (President, Treasurer, Financial Secretary)
- n) The WMC shall own a store/office where materials are kept and activities coordinated.
- o) It shall meet once a month. Extra ordinary meetings shall be call if need be.

**ARTICLE 6: FUNCTIONS OF THE EXECUTIVE**

**6.1: PRESIDENT**

- a) He shall call and preside over WMC and general assembly meetings.
- b) He shall represent the ..... village water supply scheme in all official dealings.
- c) He shall sign and disburse funds with the approval of the WMC executive.
- d) He shall sign all legal deeds and contracts on behalf of the management scheme.
- e) He shall present a report to general assembly and other appropriate quarters every six months.
- f) A vice president who acts in his absence shall assist him.
- g) Follow up decisions and plan of action.
- h) Shall be a co- signatory to the WMC Credit Union/Bank account.
- i) Shall keep a reserve key of the store/office.
- j) Shall be responsible for the proper functioning of the water supply scheme and be the chief project manager in all aspects.

**6.2: SECRETARY**

- a) Shall take minutes in all meetings.
- b) Takes care of documentation and correspondences.
- c) Shall ensure the smooth functioning of secretariat and make sure that rules and regulations are respected.
- d) Send out circulars for meetings and community work.

- e) Keep an up-to-date list of all members.
- f) Shall preside over meetings in the absence of the president and vice.

### **6.3: VICE-SECRETARY**

- a) Shall act in the absence of the secretary.
- b) He/she and the secretary shall be charged with the distribution of all circulars.

### **6.4: FINANCIAL SECRETARY**

- a) Shall be responsible for all financial matters of the project and maintain an up-to-date financial record.
- b) Shall coordinate with the treasurer to prepare a financial statement.
- c) Shall keep an inventory of all the projects assets and liability.
- d) Report all financial transactions to the WMC.
- e) Be a co-signatory to the WMC Credit Union/Bank account.

### **6.5 TREASURER**

- a) Shall receive and pay into the project account all monies meant for the project.
- b) Pay out money on approval of the president.
- c) Be a co-signatory to the WMC Credit Union/Bank/Bank account.
- d) Shall keep all contribution above 50,000 FRS in the Bank/Credit Union account.
- e) Shall coordinate with the financial secretary to prepare a financial statement.

### **6.6 PUBLICITY SECRETARY**

- I. Shall be responsible for spreading information.

## **ARTICLE 7: LOSS OF MEMBERSHIP AND REPLACEMENT**

### **7.1 Membership in the executive shall be lost through**

- a) Death
- b) Incapacity
- c) When he/she embezzles project funds
- d) Regular absence from meetings.
- e) Through a vote of no-confidence by the general assembly (at least a 2/3 majority).

### **7.2 Replacement of a member shall be through**

- a) Elections convened at their earliest convenience.

## **ARTICLE 8: FINANCIAL OBLIGATIONS**

### **8.1: SOURCES OF FINANCE**

The WMC shall raise money through the following means

- a) Payment of annual water rates by the community members.
- b) Freewill donations.
- c) Grants from NGOs and government departments.
- d) Council contribution.

### **8.2: WATER RATE**

The users in the community shall pay the following rates:

- a) Men-2000frs./year
- b) Women-1000frs./year
- c) Block moulders 4000Frs/Project
- d) Private connection-2.000frs (Houses without water systems) and 5,000Frs (Houses with water systems)
- e) Schools-Amount to be determined by WMC and shall be a responsibility of the community.
- f) Churches-2.000frs.
- g) Health Centres 10,000Frs

### **8.3: CONNECTION RATES**

Those who want to take water to their homes and premises shall pay the following rates:

10,000 FCFA

#### **8.3.1: PRIVATE HOMES**

- a) Must have met all his/her contribution/obligations during the rehabilitation stage.
- b) Pays 20.000/40,000frs depending on residency status (Elite/New comer) as will be determined by the WMC
- c) Provides all his materials.
- d) All connections will be done exclusively by the WMC employed caretaker.

#### **8.3.2 SCHOOLS**

#### **8.3.3 CHURCHES**

#### **8.3.4 HEALTH CENTERS**

N/B LEVIES OR THE ABOVE THREE WILL BE DETERMINED BY THE WMC

#### **ARTICLE 9: DISTRIBUTION OF WATER**

- a) The connection of standpipes shall be approved only by the WMC.
- b) Water shall be distributed to individuals/organisations on condition that an application form is collected, filled and approved by the WMC.
- c) Applicants must have contributed fully in communal work as would be indicated by the work register.
- d) No individual/organisation shall construct a standpipe without the approval of the WMC.
- e) Applicants for private connections must have respected all financial contributions.
- f) Applicant shall dig the pipeline and provide good quality materials.

#### **ARTICLE 10: THE CARETAKER**

- a) The caretaker shall be employed by the WMC on behalf of the community.
- b) He/she shall check regularly all the structures from the catchment to stand taps.
- c) Shall take care of minor repairs on the structures.
- d) The caretaker shall detect problems in the system and report to the WMC.
- e) Shall make a request of the materials needed for repairs and present to the WMC.
- f) The caretaker must keep records of observations, breakdown and all other activities done concerning the water system.
- g) He/she shall be subject to discipline ranging from suspension to dismissal approved by the WMC depending on the seriousness of his crime.
- h) The caretaker shall be paid a monthly salary of 3,000 FCFA, and shall receive an additional 5,000 FCFA for all private connections from the concerned.
- i) The caretaker shall sign a contract of work with the WMC.

#### **ARTICLE 11: COMMUNITY WORK**

- a) Community work shall be organised and supervised by the WMC.
- b) Women shall clean the stand taps while the men will work on the catchment area and the storage tank (it can change when necessary).

#### **ARTICLE 12: WATER MANAGEMENT**

- a) Each stand tap shall have a tap manager and assistant.
- b) In case of serious water shortages the WMC can stop people from carrying water to mould blocks, nursery owners etc.

**ARTICLE 13: DISCIPLINARY MEASURES**

- a) Defaulters during community work shall pay a fine of 1000 FCA.
- b) Defaulters who fail to pay their levies shall pay the amount owed plus an additional amount to the traditional council.
- c) Illegal connections attract a fine of 50,000 FCA and the line shall be disconnected.

Defaulters shall be reported to the traditional council and if they do not comply, then to the council and then the administration (Divisional Officer).

**ARTICLE 14: DAMAGES**

- a) Any person who damages a structure shall pay for it.
- b) Leakages from a private connection for up to 24 hours shall be disconnected immediately by the caretaker until it is repaired.
- c) Damaged stand taps shall be replaced by the quarters concerned.

**APPROVAL:**

\_\_\_\_\_  
 President WMC

\_\_\_\_\_  
 Mayor COUNCIL

\_\_\_\_\_  
 Divisional Officer

**Annex: II GRAVITY WATER SCHEME MONITORING FORM**

Visit date:	Division/subdivision	Village:	No of
visits:			

Date of last visit:			Date scheme was last check:			Type of scheme:		
Has scheme been working without a breakdown since last visit:								
If there has been a breakdown indicate the type of breakdown:								

**Physical scheme check**

No. of committee members taking part:			Position:					
<b>Intake or immediate catchment area:</b>			<b>State</b>			<b>Grading</b>		
Wpt ID	X -Coord	Y -Coord.						
						<b>1</b>		
Area properly fenced			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
Area partly fenced or broken			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
Fence not needed			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
Has enough vegetation cover			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
No grazing in the area			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
No farming in the area			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
No bush fire occurring frequently			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
Bee keeping with KTB in the area			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
Indigenous bee keeping in the area			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
Farming in catchment periphery			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
Grazing in catchment periphery			Yes <input type="checkbox"/> No <input type="checkbox"/>			1		
Total						<b>11</b>		
<b>Intake</b>								
Wpt ID	X -Coord	Y -Coord						
Technical state good:			Yes <input type="checkbox"/> No <input type="checkbox"/>			2		
Clean: No sediments and No growth			Yes <input type="checkbox"/> No <input type="checkbox"/>			2		
Functioning:			Yes <input type="checkbox"/> No <input type="checkbox"/>			2		
Covers in position:			Yes <input type="checkbox"/> No <input type="checkbox"/>			2		
Locks in position:			Yes <input type="checkbox"/> No <input type="checkbox"/>			2		
Washout good:			Yes <input type="checkbox"/> No <input type="checkbox"/>			2		
Condition of flow: Normal			Yes <input type="checkbox"/> No <input type="checkbox"/>			5		
Reduced			Yes <input type="checkbox"/> No <input type="checkbox"/>			2		
No water at all			Yes <input type="checkbox"/> No <input type="checkbox"/>			0		
Total						<b>19</b>		

<b>Main gravity pipeline:</b>			<b>State</b>			<b>Grading</b>		
Wpt ID	X -Coord	Y -Coord.						

Pipeline covered:			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Pipeline indicators intact:			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Low points functioning:+			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Air valves functioning:			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Valves boxes in place			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Valve chambers protected			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
No leakages along pipeline			Yes <input type="checkbox"/>	No <input type="checkbox"/>	1
Total					13
<b>Distribution pipeline</b>			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Wpt ID	X -Coord	Y -Coord.	<b>State</b>		<b>Grading</b>
Pipeline covered			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Partly covered/threaten by erosion			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Pipeline indicators intact			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Low points functioning			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Air valves functioning			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Valve boxes in place			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Valve chambers protected			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
No leakages along pipeline			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Total					16
<b>Storage tank</b>					
Wpt ID	X -Coord	Y -Coord			
Technical state good:			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Tank leaks			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Covers in position:			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Washout functioning:			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Valves functioning			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Tank abandoned			Yes <input type="checkbox"/>	No <input type="checkbox"/>	3
Float valves functioning			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Total					15

<b>Break pressure tank:</b>			<b>State</b>	<b>Grading</b>
Wpt ID	X -Coord	Y -Coord.		



Technical state good		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Tank clean		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Washout functioning		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Gate valves functioning:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Overflow clear		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Float Valve functioning		Yes <input type="checkbox"/>	No <input type="checkbox"/>	3
Cover in position		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Total				<b>15</b>
<b>Sedimentation tank</b>				
Wpt ID	X -Coord	Y -Coord.		
Technical state good		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Covers in position		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Washout functioning		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Valves functioning		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
No leaks		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Total				<b>10</b>
<b>Filtration tank</b>				
Wpt ID	X -Coord	Y -Coord		
Technical state good:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Slow sand filters good		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Up flow roughing filters good		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Covers in position:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Washout functioning:		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Valves functioning		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Total				<b>12</b>

<b>Committee</b>				
Committee meeting regular				2
Committee meeting Irregular		Yes <input type="checkbox"/>	No <input type="checkbox"/>	0
Problems in committee		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Types of problems		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Problems with users group		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Problems with Caretaker		Yes <input type="checkbox"/>	No <input type="checkbox"/>	5
Type of problems		Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Caretaker paid regularly		Yes <input type="checkbox"/>	No <input type="checkbox"/>	4
Paid irregularly		Yes <input type="checkbox"/>	No <input type="checkbox"/>	1
Not paid		Yes <input type="checkbox"/>	No <input type="checkbox"/>	0
Total				<b>15</b>

<b>Users</b>		
Satisfied with services of committee	Yes <input type="checkbox"/> No <input type="checkbox"/>	2
What are the major problems with the committee?	Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Community participation in maintenance Financial	Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Manual Available	Yes <input type="checkbox"/> No <input type="checkbox"/>	<b>1</b>
Total		<b>7</b>
<b>Caretaker:</b>		
Trained:	Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Is he/she active and working well?	Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Works with logbook	Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Has complete tool box	Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Incomplete tool box	Yes <input type="checkbox"/> No <input type="checkbox"/>	1
Collaboration with WMC	Yes <input type="checkbox"/> No <input type="checkbox"/>	5
Total		14

Make sure the logbook is seen and it is up-to-date and signed by the competent WMC EXC

<b>Stand tap NO</b>			Type: Public/private	
Wpt ID	X -Coord	Y -Coord.		
Stand tap location				
Functioning				2
Date of last visit:			Yes <input type="checkbox"/> No <input type="checkbox"/>	
Spare parts purchased			Yes <input type="checkbox"/> No <input type="checkbox"/>	
Control valve in position			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Leaks at control valve/tap			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Water flows around the year			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
No water at times			Yes <input type="checkbox"/> No <input type="checkbox"/>	1
Tap manager appointed?			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Total				
Not paid			Yes <input type="checkbox"/> No <input type="checkbox"/>	0
Total				<b>11</b>
<b>Stand tap NO</b>			Type: Public/private	
Wpt ID	X -Coord	Y -Coord.		
Stand tap location				
Functioning				2
Date of last visit:			Yes <input type="checkbox"/> No <input type="checkbox"/>	

Spare parts purchased			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Control valve in position			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Leaks at control valve/tap			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Water flows around the year			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
No water at times			Yes <input type="checkbox"/>	No <input type="checkbox"/>	1
Tap manager appointed?			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Total					
Not paid			Yes <input type="checkbox"/>	No <input type="checkbox"/>	0
Total					<b>11</b>
<b>Stand tap N0</b>			Type: Public/private		
Wpt ID	X -Coord	Y -Coord.			
Stand tap location					
Functioning					2
Date of last visit:			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Spare parts purchased			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Control valve in position			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Leaks at control valve/tap			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Water flows around the year			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
No water at times			Yes <input type="checkbox"/>	No <input type="checkbox"/>	1
Tap manager appointed?			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Total					
Not paid			Yes <input type="checkbox"/>	No <input type="checkbox"/>	0
Total					<b>11</b>

Intake or immediate catchment area:			State	Grading	
Wpt ID	X -Coord	Y -Coord.			
Area properly fenced			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Area partly fenced or broken			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Fence not needed			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Has enough vegetation cover			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
No grazing in the area			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
No farming in the area			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
No bush fire occurring frequently			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Bee keeping with KTB in the area			Yes <input type="checkbox"/>	No <input type="checkbox"/>	2
Indigenous bee keeping in the area			Yes <input type="checkbox"/>	No <input type="checkbox"/>	3
Farming in catchment periphery			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Grazing in catchment periphery			Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Total					<b>11</b>
<b>Intake</b>					

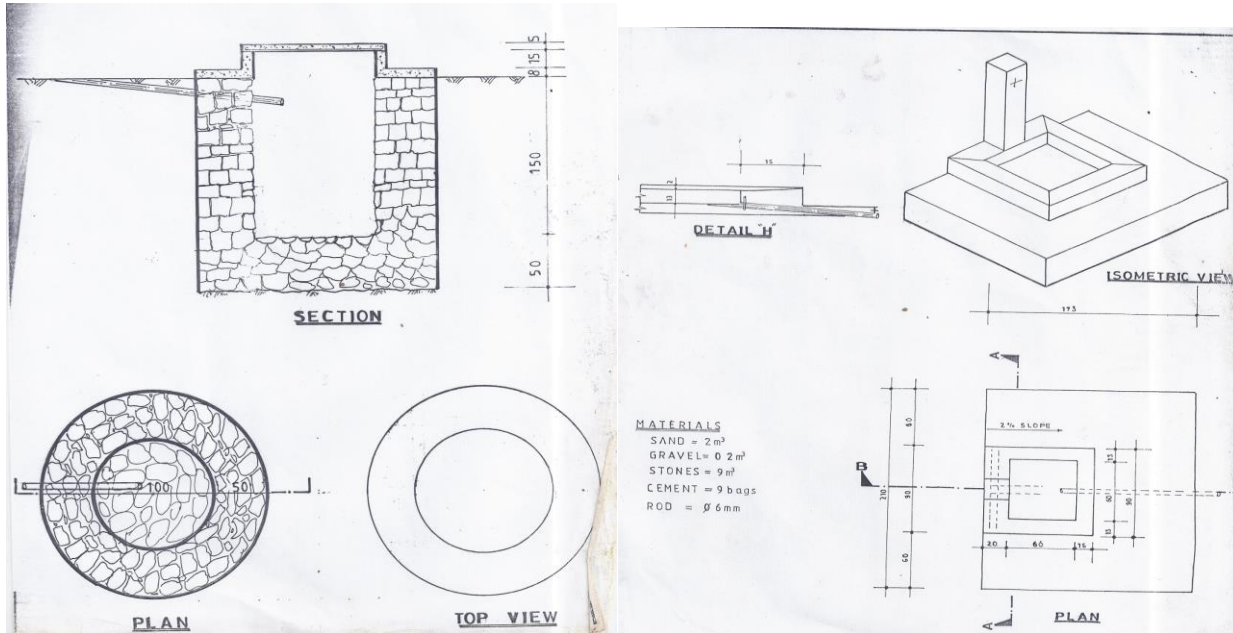
Wpt ID	X -Coord	Y- Coord		
Technical state good:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Clean: No sediments and No growth			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Functioning:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Covers in position:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Locks in position:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Washout good:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Condition of flow: Normal			Yes <input type="checkbox"/> No <input type="checkbox"/>	5
Reduced			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
No water at all			<b>Yes <input type="checkbox"/> No <input type="checkbox"/></b>	0
Total				<b>19</b>

<b>2<sup>nd</sup> Storage tank NO</b>				
Wpt ID	X -Coord	Y- Coord		
Technical state good:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Tank leaks			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Covers in position:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Washout functioning:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Valves functioning			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Tank abandoned			Yes <input type="checkbox"/> No <input type="checkbox"/>	3
Float valves functioning			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Total				<b>15</b>
<b>Collection tank</b>				
Wpt ID	X -Coord	Y -Coord.		
Technical state good:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Tank leaks			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Covers in position:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Washout functioning:			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Valves functioning			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Tank abandoned			Yes <input type="checkbox"/> No <input type="checkbox"/>	3
Float valves functioning			Yes <input type="checkbox"/> No <input type="checkbox"/>	2
Total				<b>15</b>

- 1) Please, to avoid confusion you may ignore the graded magnitude and check if the negative aspects are more than positive aspects then action need to be taken to redress the problems.

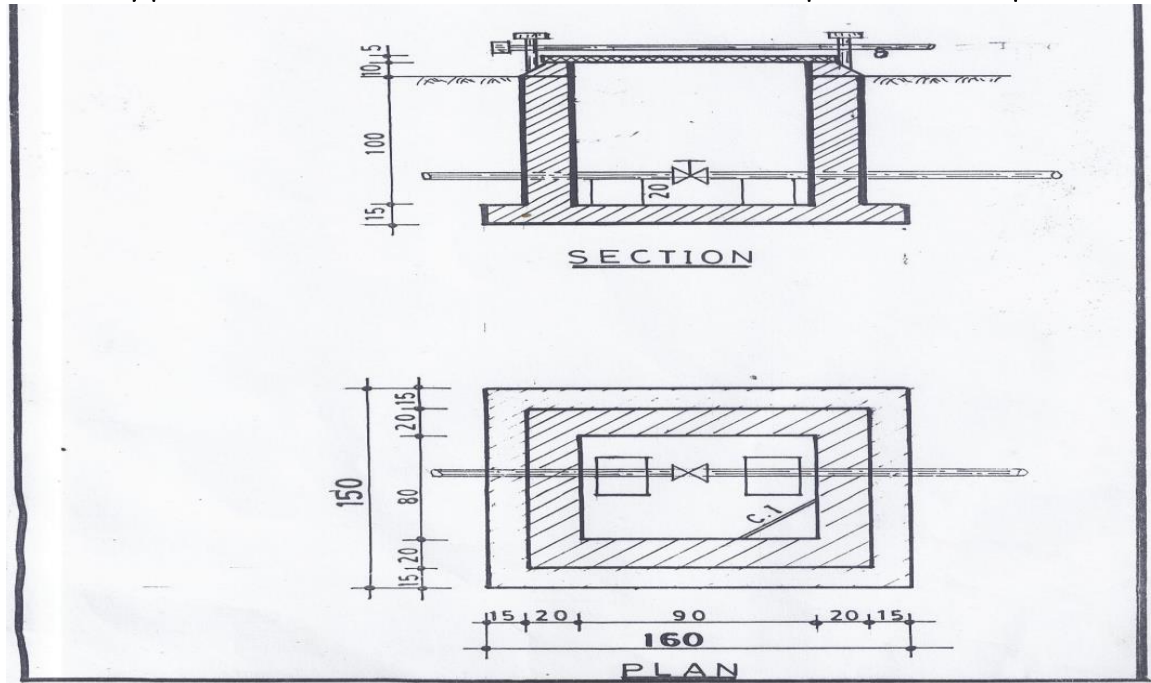
2) Intensify monitoring if positive points are more than negative points.

ANNEX III: EXAMPLE PHOTOS OF SOME WATER SUPPLY COMPONENTS AND HYGIENE PRACTICES



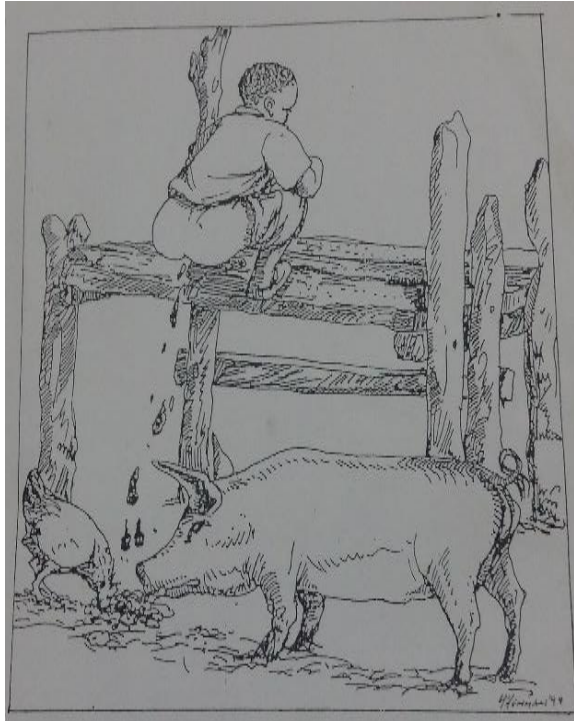
Soak-away pit

Sample of a stand tap

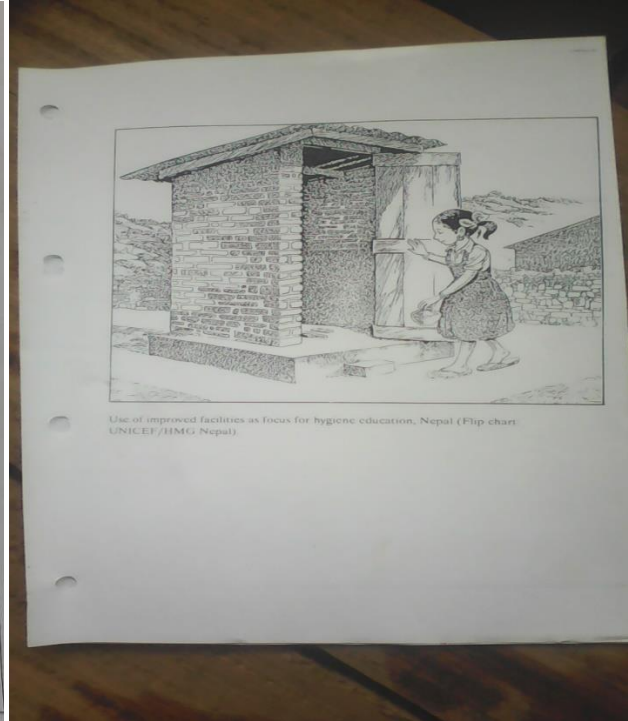


Washout chamber

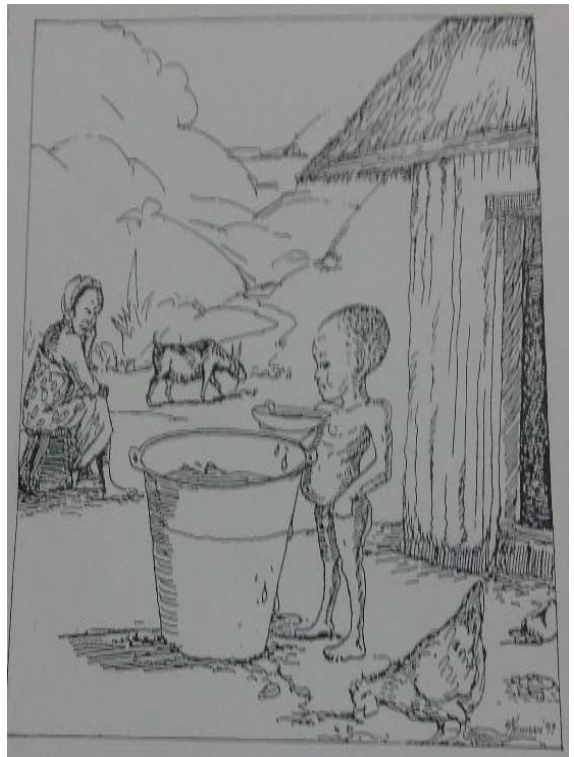
Other hygiene practices



Poor latrine construction



Modern or VIP Latrine



Poor water storage method



Good water storage method





Bad hygiene practices



Poorly maintained stand tap



Tap functioning well but surrounding dirty



Very common and bad practices



Intake of a steam water source



## Annex: IV BOREHOLE FITTED WITH A HAND PUMP

Borehole may be fitted with a variety of pumps. The top of the borehole is sealed to prevent the access of surface water from polluting the borehole. The pump platform directs spilt water to the drain from where it flows to the soak-away pit.

### Description of Operation and Maintenance activities:

#### *Daily*

- ❖ Check if the foot valve holds water in rising main
- ❖ Check if the pump delivery is normal or low
- ❖ Check if the hand pump is firmly fixed in place
- ❖ Check for loose nuts and bolts on the hand pump
- ❖ Clean the platform and drain
- ❖ *Check the is in good condition*

#### *Weekly*

- ❖ Tighten all the above ground nuts and bolts with a spanner
- ❖ Clean the accessible moving parts

#### *Monthly*

- ❖ Carry out weekly checks
- ❖ Collects and record contributions to the water committee

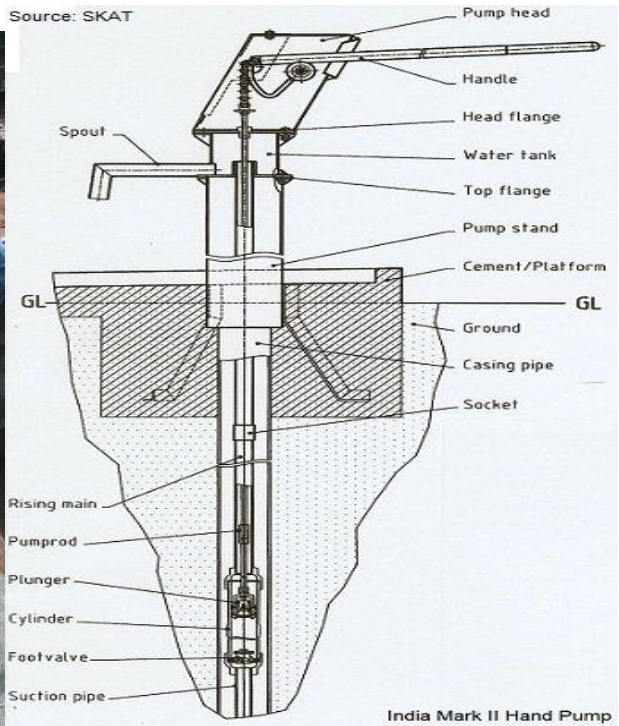
#### *Yearly*

- ❖ Dismantle the pump head parts
- ❖ Remove the connecting rod, piston assemble and foot valve
- ❖ Replace warn out parts
- ❖ Replace piton seals
- ❖ Straighten bent connecting rods or replace
- ❖ Replace rods with badly corroded threads
- ❖ Check the rising main and replace badly corroded pipes
- ❖ Assemble the pump head
- ❖ Check the pump operation and pump until the water delivered is clean

- ❖ Record all significant actions

### Irregular

- ❖ Repair cracks with cement mortar in the pump platform and drain
- ❖ Arrange to clean the borehole if the pump delivers cloudy water with silt



Borehole and hand pump under construction