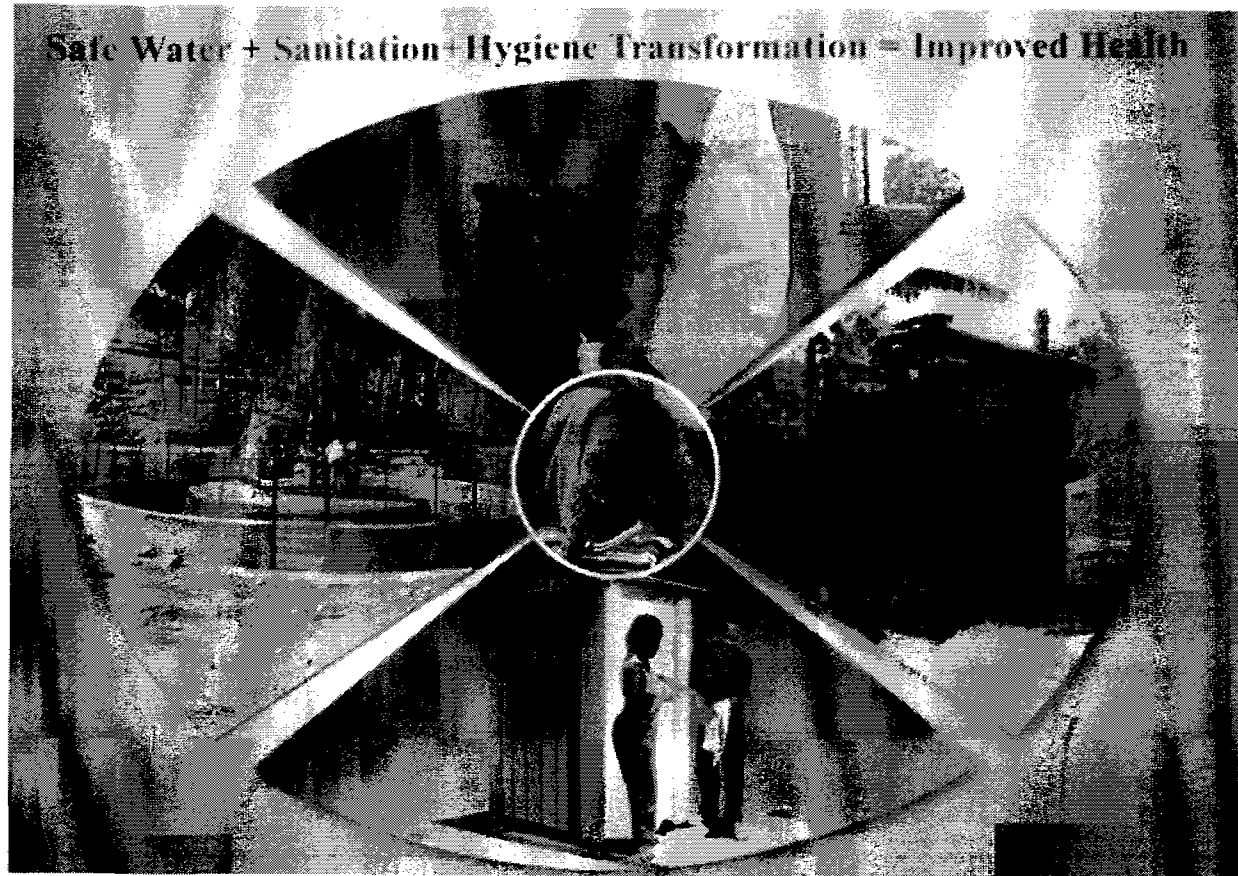


**Community Based Hygiene and Sanitation Promotion Guideline
Based on PHAST Methodology**

Facilitators Guideline



Prepared by Ministry of Health and UNICEF

203.2-04CO-19271

Problem Statement

In rural Eritrea sanitation coverage remains extremely low. Only 3.6% of the population has access to sanitation facilities. The impact of poor sanitation and hygiene are known to be disastrous for children under five, however, it also has an important impact on the health of school-age children including adolescents. Most of the rural and urban primary schools in Eritrea either lack appropriate sanitation facilities or the conditions of the existing facilities are unusable or unsafe. Poor sanitation environment coupled with poor level of hygiene awareness, often result in schools becoming unsafe places where diseases can be transmitted.

Poor hygiene and sanitation practices on food, solid waste, water, human excreta disposal handling and poor hand washing practices have impact on the following areas of our lives.

Health impacts (at household, community and national level) Affects child health, increases child mortality especially under five, affects Childs cognitive growth.

Economic impacts (at household, community and national level) reduce productivity, resources (time money and labor) to seek medical services.

Educational impact: (at household, community and national level) increases school dropouts and absentism leading poor school performance.

Social impact: (at household, community and national level) children miss the opportunity to play with the healthy children.

Water and sanitation related diseases such as diarrhea, eye and skin infection, malaria are common in Eritrea especially in the rural areas. This costs the households, communities as well as the national government a lot of resources while it is far less costly to prevent it and improve the quality of life of citizens through minimum inputs.

This necessitates to -----community based intervention with full participation of community at all levels of the hygiene and sanitation promotion cycle

Ministry of Health

UNICEF

- Follow-up- After facilitators are trained on the PHAST tool there has been limited follow up and back up to the communities to implement their action plan. For instance, little technical or resource back up is given to build the capacity of the households to build their own sanitation facilities and reinforce proper hygiene and sanitation behavior.
- Proper orientation on the PHAST process
- Proper post implementation monitoring
- Reporting system
- Tracking of improvement as a result of community intervention

What is the objective of the Guideline?

- To enhance PHAST methodology and ensure sustainable community action through village hygiene promoters
- To develop capacity of the community to assess analyze, plan, implement and monitor community action.
- To contribute in the reduction of water, sanitation and hygiene related diseases at community level.

How are this Objectives Accomplished

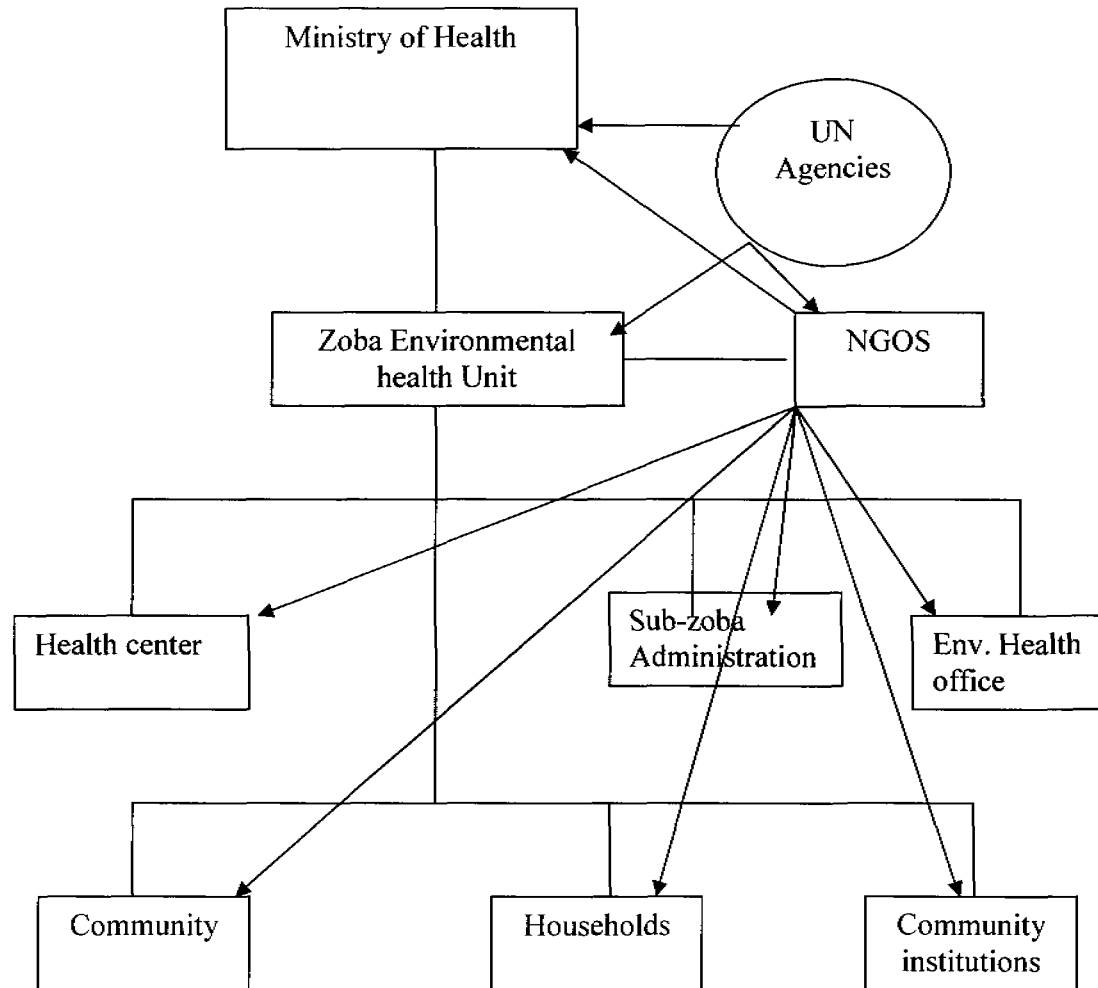
- By assessing peoples knowledge attitude and practices
- By assessing peoples environmental situation
- By analyzing constraint for change
- Planning for action
- Implementing and sustaining change

Who will us this guideline?

This guideline is primarily designed for the village hygiene promoters; however the following can also make use of it.

- Village water and sanitation committee
- Village health committee
- Village development committee village administration and other actors

Stake holders chart



Who can best be a Promoter in a Community?

- Should be selected by community
- Motivated to work voluntarily
- Preferably women
- Resident /community member
- Respected/trusted by the community
- Where possible who can read and write
- Matured
- People with community health orientation such as malaria agents, Red Cross volunteers, Traditional Birth attendants, growth promoters etc.

Training/equipping WASH Promoter

Once WASH hygiene promoter is identified (most of the time during community map preparation) the training sessions on

PHAST process that consists:

- How to carry out assessment,
- How to sensitize people on WASH issues
- How to analyze data collected,
- How to prepare assessment report
- Follow up implementation
- How to build sanitation facilities

Duties and Responsibilities of WASH Promoter

- Facilitate community dialogue.
- Facilitate assessment exercise using participatory tools such as mapping, inspection, household survey and group discussion.
- Participate in compiling and analysis of information collected through the assessment tools.
- Participate in the preparation of community action plan and proposal using the standard formats
- Conduct household visit for assessment, promotion and follow up purposes
- Promote construction, use and maintenance water and sanitation facilities
- Prepare and submit village report to the nearest MoH focal person/public health technician.

What are the Possible Incentives for the VHP?

WASH promoters are volunteers and they do not get any payment for their contribution, however the following are some of the incentives village hygiene promoter can get:

- Sanitation, hygiene facilities such as latrine
- Recognition/ appreciation
- Develop Skills
- construction /Rehabilitation of sanitation facilities to be linked to Income generating activity-IGA
- Promotion materials aprons, T-shirts, bags, soaps etc.
- Anything the community agrees as appropriate.

To How many House Holds Is One WASH Responsible?

At least 1 WASH Promoter to 200 households

Priority hygiene and Sanitation Issues

- Water facilities and use
- Sanitation facilities and use
- Personal hygiene focusing on hand washing
- Food hygiene
- Household and surrounding sanitation

I. Water Facility and Use

There are different types of water facilities in the rural areas classified by their type and protection such as (illustration to be inserted)

Unprotected

Spring
Unprotected dug well
River
Dam
Pond

Protected

Protected Spring
protected dug well
Borehole

Water Lifting Devices

- Bucket and robe
- Hand Pump
- Solar pump
- Motorized
- House to House connection

Where Does Water Get Contaminated?

Risk practices at source transportation and storage of water

It is easier to prevent water getting contaminated in the first place than it is to clean it; therefore it is important to consider all possible sources of contamination between the times that water falls as rain the time it is used.

- The collecting surface for water may have leaves, insects and animal faeces on them.
- When water runs over the earth, it may become contaminated with human and animal excreta, refuse and other household waste.
- Shallow wells may be contaminated by excreta and refuse being washed out in to them, especially if people practice open field defecation or latrines are nearby.
- Wells may also be contaminated by the use of dirty containers for drawing water.
- Rivers, lakes or dams may be contaminated by bathing, or urinating or defecating in the water.
- Even piped water may become contaminated from leaks in the pipes, especially when these pass near foul water or dirty drains.

At the source

- Unclean bucket and robe during lifting of water
- Animal excreta and human excreta washed in to the source
- Seeping of lifted /scooped water back to the source.
- Dead animals and leafs etc can be decomposed inside.

During transportation

- Use of unclean and uncovered vessels
- Using improper cover like leaves
- Handling with dirty hand

During Storage

- Bad scooping practices
- Unclean storage facility
- Dipping dirty hands
- Uncovered storage facility

Effects of poor water handling practices

Water can affect health in a number of different ways. Lack of water for personal hygiene may result in increase transmission of some diseases, called water washed diseases. Water may carry the organisms of specific diseases called water borne diseases. Or it may be necessary in the life cycle of a diseases vector such diseases are called water related diseases.

Water washed diseases

- Diarrhea
- Skin infection (scabies)
- Eye infection (trachoma)

Water Borne disease.

- Amoebas
- Hepatitis A

Water related diseases

- Malaria
- Shistosomiasis (bilharzias)

Proper handling of water at different levels

II. Sanitation Facilities and Use

Risk hygiene and sanitation practices at different places

Children/defecating practices

- On the ground in the house
- On the ground in the yard
- On the ground out side the yard
- Leaving children faeces lying on the ground

Adult men and women

- On the ground in the yard
- Out side the yard in bush,
- On agricultural area,
- On river bed, in abandoned houses

Effects of poor hygiene and sanitation practices

Proper sanitation facilities and their importance (simple pit latrine and VIP latrine)

III. Personal Hygiene with Focus on Hand Washing

Poor personal hygiene and hand washing practices

Effects of poor personal hygiene and hand washing practices

Hand Washing facilities and location

Proper personal hygiene and hand washing practices

- Hand washing / Breast washing for lactating mothers
- Body
- Tooth care
- Nail care
- Hair care

IV. Food Hygiene

Poor Handling of Food

Food gets contaminated in variety ways

- From dirty hands
- From domestic flies and cockroaches, rats and other rodents
- From contaminated soil by human excreta
- From sick cows or goats (milk and meat)
- Food infected with moulds

Proper Handling of Food

At household

- Hand washing before eating and after visiting toilet.
- Washing green eaten vegetable thoroughly.
- Placing food in a clean and covered container to prevent contamination from flies and cockroaches.
- Properly boil milk and place it in cool place.

At market

- Educate venders in proper handling of food and vegetables.
- Introduce recipients or garbage containers to prevent breeding of flies and other vectors.
- Rat control

Effects of Poor Handling of Food

V. House and Surrounding

Improper Housing and Dirty Environment

- Congestion
- Unavailability of separate animal pen
- Lack of ventilation
- Smoky cooking facility
- Unavailability /poor solid waste facility

- Lack of liquid waste drainage facility.

Effects of Improper Housing and Dirty Environment

- Easy transmission of communicable
- In door Pollution

Proper Housing and sanitation facility

- Pit disposal facility
- Modified stove
- Separate domestic pen
- Bed nets
- Screen of windows
- Proper ventilation

Vector control

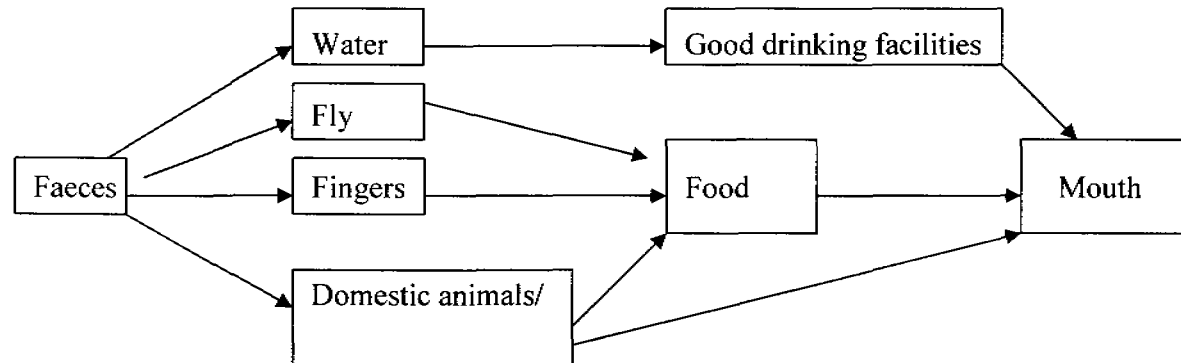
Control of adult insects

- Killing adult flies using fly –killers, with traps (of gauze or metal netting)
- Using VIP latrines

Larvae control

- Destruction of their habitat or their food: refuse disposal, excreta disposal.
- Reclamation of soil by draining swamps, puddles or destroying abandoned containers of water in which mosquitoes deposit their eggs

F Diagram

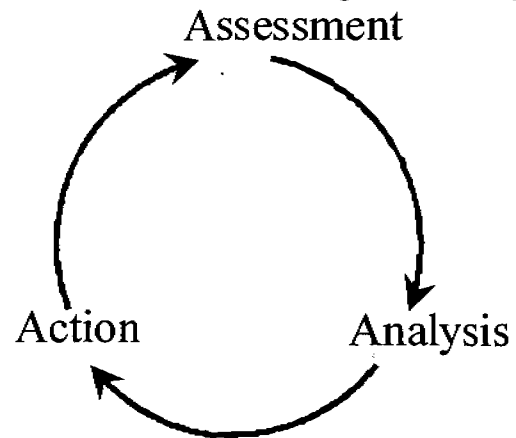


How can these prioritized issues be addressed at community level?

Hygiene and Sanitation Promotion Cycle

Triple 'A' cycle represents the process of assessment, analysis and action. The content of the guide line will follow the approach in assisting communities to identify, plane, implement and monitor and evaluate community action plans.

What is Assessment: - where we are now. It is the process of identifying needs related to hygiene and sanitation behavior by collecting relevant information on a target community.



Why do we carry out assessment?

- It helps decide what can be done next identify existing situation
- Assessment gives both the beneficiary communities and the implementing agency an opportunity to discuss problems and determine the level of intervention required.
- Without proper needs assessment planning, implementing project activities can become ineffective.
- Well-focused assessment, using participatory tools and techniques such as community mapping and house-to-house surveys, is an important prelude for action.

What kind of information do we collect?

- Water facility and use
- Sanitation facility and use
- Personal hygiene focusing on Hand washing
- Food hygiene
- House and surrounding environment

In addition data on the following variables such as population, no of HHs, no children under five, disabled and elderly, female headed households, child headed household, PLWHA etc should be collected

N.B The water source is always the central point from which to start hygiene and sanitation promotion planning.

Assessment tools

- Mapping
- Group discussion
- House survey
- Inspection

Mapping

COMMUNITY MAPPING: Map drawing of a village or community is done to assist in identifying several kinds of physical and social information such as:

- Locating existing communal and private water and sanitation facilities
- Locating major resources e.g. roads, health centers, schools, markets, farming areas, forest, rivers, etc.
- Locating distribution of common health problems and resources that promote health
- Locating distribution of local persons with special skills, e.g. artisans, bricklayers, health workers, traditional healers, etc.

Who does the mapping? The community with the help of the facilitator does mapping.

Why? In the water and sanitation evaluation or assessment, the purpose of mapping is to:

- Identify water sources where water for drinking, cooking, washing, etc.
- Identify hygiene and sanitation facilities in the community
- Identify local skilled resources that could assist with improvement of water, hygiene, and sanitation resources and hygiene practices
- Identify availability of local resources for improvement of water sources and sanitary facilities e.g. stones, wood, etc.
- Identify no of children under five per household
- Every household must be represented in the map

Materials: If map making is done on the ground, local materials such as sticks or stones can be used. However, it is better for the facilitator to carry with him/her pens, paper, or flip charts in case some from the community will be able to draw directly on the bigger paper

Activity

- Use instructions in the PHAST Guideline

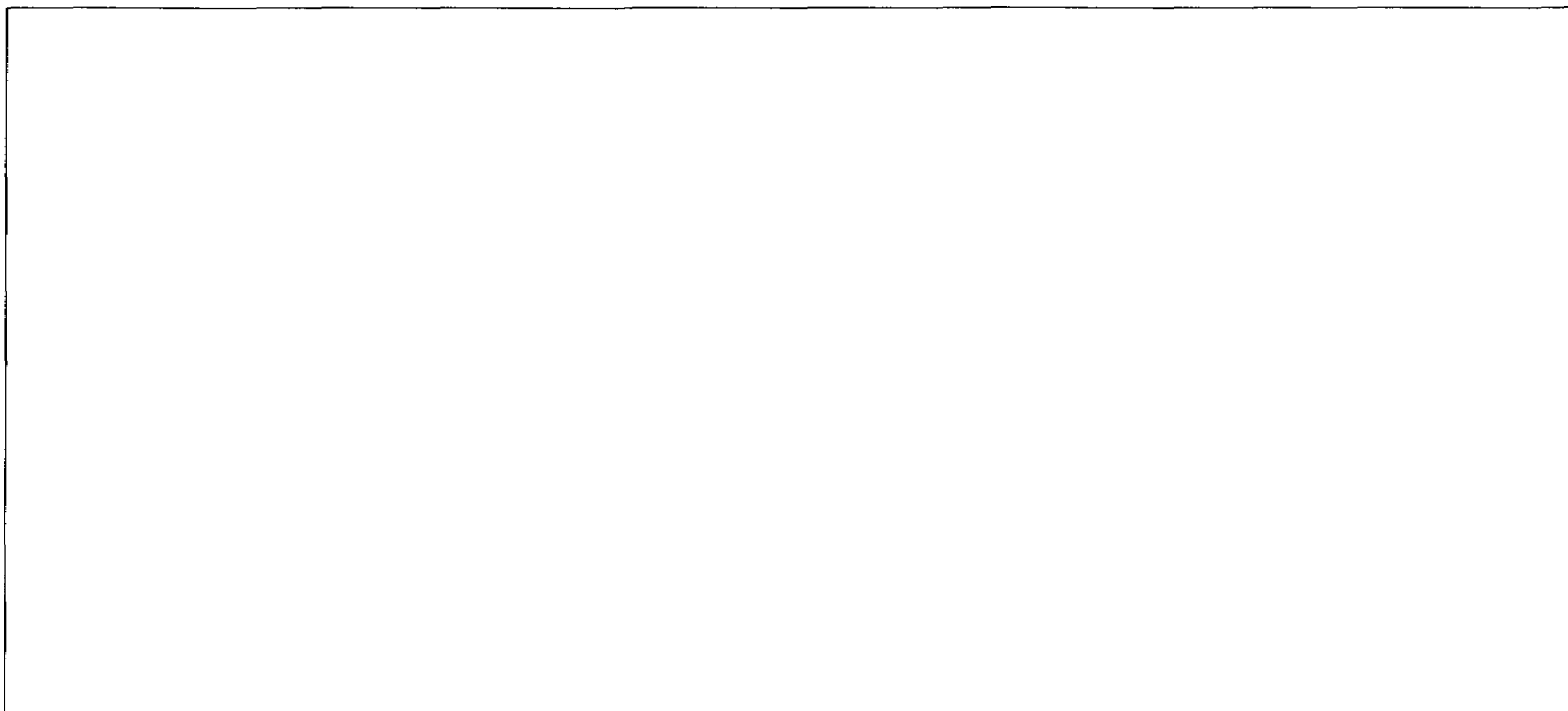
Uses: Community map can be used to gather information for various uses, for example, It gives a general picture of the community for collecting baseline information for evaluation purposes comparing the before and the after situation analysis.

Community mapping can be used to develop village action plans identify local resources (human, material, and financial)

Time: 1-2 hrs

Target group: Be done with a mixed group preferably allow men, women and children, however in some areas separating men and women groups may be necessary.

Community Map (Village Name)



N.B Sample community map to be inserted.

Water Supply Inspection Data Sheet: The water source is always the entry point for the promotion of village hygiene and sanitation. The assessment of the village's water supply facilities is therefore important. Water sources can range from traditional systems such as

shallow hand dug wells, springs, and dams to improved / modern systems such as hand pumps and motorized systems. The source may be in good or poor condition and/or some of the important components may be missing. All of this information should be recorded in the water supply inspection data sheet.

N.B It will follow the information collected in the mapping exercise

Purpose: To establish the status of existing water supply facilities from community's perspective using community map.

Activities:

- Prepare water supply facilities inspection sheet.
- Visit water supply facilities and check / observe its key components
- Accurately fill the inspection data sheet with all information gathered
- Sign and put entry date

Who does the Inspection? Members of community who can read write as well as community facilitators/ mobilizer can enter the data from layman's perspective.

Material: Inspection data sheet, pen/pencil

Use: It can be used as preliminary information of existing status of the water supply facilities in the community.

Time: Approximately 1hr.

Inspection Data Sheet

Number of Facilities	Type	Working Condition		Water Quality		Protection		Floor		Drainage		Wall		Cover Slab		Protection Structure				Water Lifting Device		Reservoir	
		G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B
Sub-total																							
TOTAL																							

KEY: **G – Good** **B – Bad**

Comments 1. _____
 Comments 2. _____
 Comments 3. _____

Input carried out by - Name: _____ Title: _____ Date: ____/____/____

Village _____ Sub-zoba _____

Definitions

Number of Facilities	
Working Condition	
Protection	
Floor	
Drainage	
Wall	
Cover Slab	
Protection Structure	
Water Lifting Device	
Remarks	

N.B to define good/ bad component if possible to insert illustrations on each item

Focal Group Discussion (FGD)

The following topics will be discussed

1. Characteristics of FGD
2. How to conduct FGD
3. Analysis of results

Characteristics of FGD

- It is qualitative not numerical
Answers questions – Not how many; but why?
- We use it when we want to know:-
 - Options , in depth information
 - Concepts
 - Contents of a questionnaire
 - Hypothesis development
- Eg. In a district where there is high magnitude of malnutrition
The why part can be studied using FGD.
- Not to be used for generalizing findings
(Sample might not be representative)

How to conduct FGD

- a. Preparation (identify groups for discussion) of study participants (6 – 8)
- b. Sub group or classify the participants by age (old vs. young), sex, literacy, place of residence (urban vs. rural) etc.
- c. Preparation of discussion guides / questions for discussion
- d. Preparation of facilitators & note takers
- e. Training of facilitators and note takers
- f. Providing tape records & other materials

Function of facilitators & note takers

- The facilitator has to facilitate or guide the discussion; he / she has to minimized his / her Talking;
- Use tape records for taking the answers of respondents
- Note taker has to help the facilitator in reporting and recording / taking notes
- Both the facilitator and the note taker have to summarize the results of the discussion on daily basis.

2. Analyzing the results / Writing the results of the FGD

- a. Daily summarize the discussion using the discussion guide
- b. Write the report according the objectives of the study
- c. No numerical data are to be used; only description of findings.

House-to-House Survey and promotion

- Help to identify risky behaviors practiced by the household, and, based on the findings, assist the development of replacement practices that will improve the household's general health and well being.
- Help to verify/confirm information gathered through other methods such as key informant interviews, records reviews and community mapping.

Why? The purpose of the house-to-house survey is to collect data on

- Water facility and use
- Sanitation facility and use
- Personal hygiene with focus on hand washing
- Food hygiene
- House and surrounding environment

At the household level, mainly through interviewing, simple observation and structured observation

Who does the survey? Community health promoters do the house to house survey.

Interviewing: It is an important survey tool.

- It helps to find out which hygiene practices are considered ideal or acceptable within the community, and which hygiene behaviors are currently practiced and why.
- It mainly focuses on water sources, water collection and storage, latrine use, and solid waste disposal practices. Interviewing is also useful way of gaining support for an activity.

Purpose: To gather general and specific information on hygiene practices, beliefs and knowledge in community households.

Activities:

- Use the form to guide you in the interview
- Avoid leading questions such as “when do you wash your hands with soap?”
- Know the exact purpose of the interview and explain this simply to the interview subject
- Know how to introduce yourself and respect the fact that the subject is giving up his / her time to answer the questionnaire.
- Remember to thank the respondent once you have finished the interview.
- Confidentiality may be important to the respondent and individual comments should always remain anonymous.
- Know exactly how to mark the response on the questionnaire.
- Clearly mark each questionnaire with the name of interviewer and the household name.
- Keep records on how many men, women, boys, and girls are interviewed.
- Take notes on the answers of the respondent, or ask someone else to take notes

Time: 10 to 15 minutes for each household.

Materials: Household Inspection Form

Observation: Observation is the first hand recognition of what is happening. Observation can simply done along interviewing in a house to house survey. However the observant needs to be careful not to be judgmental.

It should also be noted that the presence of the observer could affect the behavior observed.

Why: To back up or cross check information gathered through methods such as key informant interviews, published and unpublished documents, and community mapping.

Activities

- Have a clear understanding of the mission.
- Keep an eye on the key activities related to water and sanitation

Time: 10 to 15 minutes for each household.

Materials: Observation checklist, notebook and pen/ pencil.

N.B Every relevant data collected using the above tools will be summarized and entered in the “Community Sanitation and Hygiene report form “

Analysis- What does the Information collected in the assessment mean?

Community Action Plan

Based on the findings of the hygiene and sanitation inspection profile, household survey, community map and other assessment activities in the village community action plan should be prepared. The action plan includes:

- The Number of Activities
- The Type of Activities
- The Responsible Person / Agency for Each Activity
- An Implementation Timeline

Community Action Plan

No.	Problems as Identified	Analysis		Action		Time line	Responsible person
		Cause	Alternatives /solution	Community Action	Support Necessary		
1							
2							
3							
4							
5							
6							
7							
8							
9							

N.B:- the solution should only come from the community

Community Proposal

A standard outline will be prepared and utilized when requesting assistance for water supply, hygiene and sanitation activities in a community. A typical community proposal includes the following items and is signed by the village official and verified by the Field Monitoring Officer:

- The Number of Activities
- A List of the Households that are Requesting Assistance
- The Type of Activities

COMMUNITY PROPOSAL FORM

Field Monitoring Assistant: _____

Subject: Proposal for Water Supply and Sanitation Facilities Support

Village:

Sub-Zoba:

Zoba:

Country:

No.					Remarks
1					
2					
3					
4					

Date: ____ / ____ / ____

ACTION

The last component of the 'Triple A' intervention process is **Action**. The major activities in this stage are:

Water facility and use

Steps for construction/rehabilitation of latrines

Identifying people for training

Although the important role women play in domestic hygiene and sanitation has long been recognized, no attention has been paid to train them in latrine construction and maintenance. Daily experience shows us, women require more privacy to maintain person hygiene than men. As women need and care for latrine exceed men's need, it is important they have basic technology of constructing latrine. Therefore, it is necessary to select women in each village for training based on their capabilities and willingness to work voluntarily.

Care must be taken before conducting selection of female trainees. The training organizers should seek permission from village elders/participant husband and women association to find out if religious and cultural norms of the community accept participation of a woman in such activities.

After successful identification of trainees, they will receive training on different model of latrines construction for example; family VIP, schools, and health centre latrine model (details of step-by- step training shown in next chapter).

At least 2 women and 2 men are to be trained as hygiene educators for each village.

Selection of Appropriate Type of Latrine

There are many techniques for construction of latrine and the choice for appropriate one should be based on site condition and preference of population concerned. There is no formula to suit all circumstances. For each situation one to find out the following points so as to make the right decision on what type of latrine needed;

- The traditional methods and habits on defecation practice
- Method of anal cleansing
- The cultural, social or religious habits which affect the technique of excreta disposal (separation of the sexes, of groups or of individuals, particular orientation of latrines, taboo places, the need to be alone, the acceptability of emptying a latrine pit etc.
- Other information required; the level of water table, its seasonal variations, the rainfall pattern, soil type, availability of construction materials and economic status individuals.

Ventilated Improved Pit (VIP) latrine is a better choice for low income rural area because it is cheap and easy to construct (see page X for detailed breakdown of cost). In most cases, it is single pit latrine which comprises:

1) Substructure (the pit, which unlined or lined; the pit collar; and the cover slab);

The pit has diameter of 1.00m and is dug to a depth of minimum 3m. In unstable soils the pit is lined at the top portion by a single or two concrete ring based on nature of the soil. The concrete ring serves as collar to prevent the unstable soil collapsing into the pit.

2) A super structure;

There two shapes commonly preferred for family VIP latrine: the spiral and the square, the choice between the two different shapes is normally left to the householder though it is believed that the spiral one may have less odor compared to square one. The reason being circulation of air in spiral shape seems to be smooth thus giving chance for the heavier air to replace hotter air in the pit through vent pipe.

About 210 solid blocks (size 10cm x 15cm x 20cm) are required for spiral structure at height of 10 courses, using cement mortar (1 part cement, 5 parts sand). Door of VIP latrine should not be left open as it presents alternative source of light for flies thus leading to failure of fly control.

3) Vent pipe which is fitted with a fly screen

The vent pipe can be in 110 mm diameter PVC and should extend 50cm above the roof to permit sufficient fly control and air circulation to reduce odour.

A) Required procedures for Building local traditional pit latrine

There are different types of traditional latrines seen in the rural areas in Eritrea like dry pit latrine constructed from local materials like; mud bricks, stones, wood and scraps of iron bars, old rail bars, leaves and branches of trees, plastic sheeting and sacks.

Local pit latrine construction:

Step 1: Digging Pit

- The head of household selects site within the compound not more than 10m from the house.
- The pit size/ diameter is measured basically ranging from 1-1.5m
- The pit is dug to depth of 3 – 3.5 m using locally made tools like hand auger, spade, buckets etc.

Step 2: Slab construction

- Dry stone masonry is practice for lining pit in area with soft soil.
- Long iron bars/ old rails, dry woods and stones are common materials used to support the mud slab
- Plastic sheeting or iron sheets are placed on the supporting poles before casting it with clay soil to form the mud slab.
- A circular drop hole with diameter ranging from 0.1 – 0.15m left in the middle of slab

Step 3: Super structure

- The commonly found shapes of local pit latrines are either square or circular.
- Mud blocks are either used for construction of the perimeter wall or pieces of sacks, plastic sheeting, cartons, branches and leaves, sorghum stocks or any other suitable materials are thatched on wooden or iron poles to form the wall. The height of the wall 1.5 – 1.8m
- A piece of clothes/ iron sheets are hanged on the door to provide privacy
- Most of the locally constructed latrines in the villages have no roof.

Although the locally made pit latrines are useful for disposal of faeces and privacy, and bathing, it seems to be less effective in control of vectors like flies and offensive smell.

In places where people use water for washing their bottom after defecation, the floor of the latrine can be wet and this may provide potential breeding site for pathogenic micro-organisms.

B) Required procedures for Building VIP latrine

Action 1: Site Selection;

Sitting a place for latrine construction should be responsibility of the householders as this ensures sense of ownership. While selecting a site, the following should be considered:

- The site chosen for latrine construction should be at least 10m from dwelling house and should be very far.
- It should be down stream from protected water source.
- The site should be on stable soil in order to prevent pit from collapsing.

Action 2: Casting concrete ring for pit lining

- This is necessary for site with loose soil and required ring for family latrine may have internal diameter 1 m, wall thickness 0.05m and height 0.4m.
- This can be done by properly mixing 1 part of cement, 2 part of sand and 3 parts of 12mm gravel then cast it in prefabricated mould.
- After casting, leave the cement to set and remove the mould after 12 hours, then keep on curing the ring with water at least twice a day, for 5 days.

Action 3: Measuring pit size on ground

- At the selected site, drive a wooden peg into the ground while leaving its part protruding above ground. Tie a rope or string on the wooden peg and measure the rope with tape measure to 55cm (which equals to radius of external wall of the concrete ring).
- To the other end of the rope, tie a sharp wooden/ metal peg, pull the rope tightly and go round the wooden peg with the sharp object making a circular line around the peg.

Action 4: Pit Digging

- The following tools are necessary for digging pit: Shovel, pick axe, hoe, metal bucket, rope and ladder.
- Start digging inside the circular drawn on the ground till to the depth of 0.3m and then place the concrete ring into the hole while 0.1m will be left above ground.

- Alternative way of constructing a collar on pit is by using blocks or stone with clay or cement mortar around the pit. It is important to level the collar so that when the slab is placed over the collar, the pit is airtight.
- Continue digging straight down inside the concrete ring at diameter of pit being 1m. Make sure that the sides are straight by using a plumb bob. When necessary, use a shovel or a hoe to trim the sides as you keep on digging.
- Use a bucket and a rope to remove earth from the pit. Heap the earth about two meters or more away from the pit
- Dig the pit down to depth of at least 3.0m and its bottom level should not be less than 1.5 m above groundwater table. This will avoid groundwater pollution.

Action 5: Concrete Slab

It is duty of the family members to collect all construction materials like; sand, stone or gravel while MoH provides reinforcement bars and all tools required for the job. In many occasions concrete slab are preferred as it provides durable support and seals the pit. It is also easier to clean compare to timber and earth floors.

Concrete slab may be reinforced or unreinforced. Although reinforced concrete slab is durable, steel bar for reinforcement may be expensive and difficult to acquire in poor countries like Eritrea. A domed slab avoids the need for reinforcement by transmitting the load through the arch to the ground at the periphery².

a) Casting a domed Slab (Un reinforced slab)

- Make up a slab former from bricks or prefabricated mould to give correct shape to the slab. The diameter of the slab should at least exceed that of the pit to form an overlap of 0.2m. Prepare the other construction aids as illustrated in figure X. Use oil on the squat hole former to make it easier to remove after the concrete is set.
- Prepare a flat area on ground.
- Compact and smooth the sand and cover with cement bags or plastic sheeting to separate the sand from the concrete.
- Mix the concrete in the ratio of 1:2:3 (cement: sand: gravel) the size of gravel should be not more that 19mm diameter. Pour reasonable water but not too much then mix well.
- Place the squat hole former in the centre and vent pipe hole former at right position.
- Cast the concrete within the mould. In the centre of the slab, slope the concrete so that any liquid drains towards the squat hole while making sure that the surface of the slab is smooth.

- Cover the slab and leave to cure, watering when necessary to prevent drying out.

b) Reinforced slab

- Arrange the prefabricated mould or brick / circular steel shuttering (e.g. made from an old oil drum) for casting slab.
- Place paper or cement bag/ plastic sheeting under the mould.
- Take 6mm diameter reinforcement bar, make it straight, measure by tape measure 1.2m and cut 4 pieces of the same size. Then measure another 0.8m, cut 2 pieces and finally measure 0.6m, cut 4 pieces. Arrange them correctly while tying with bidding wire to form 100mm centre to centre.
- Cut the grided reinforcement bar to form squat hole and vent pipe hole.
- Place the reinforcement bar in circular mould and put the squat and vent pipe formers in their position.
- Measure cement, sand and gravel in ration of 1:2:3 mix them properly and pour reasonable quantity of water while mixing the content till it form uniform colour.
- Pour the mixture of concrete into the mould while adjusting position of the reinforcement bar to be half the thickness of the mould. Provide slope so that liquid drains towards the squat hole and make sure that the surface of the slab is smooth.
- Leave the slab for at least 5 days to cure while keeping it covered and wet. You may water the slab two to three times a day, depending on weather.

Action 6: Making Blocks for Super Structure

- Level ground where the blocks will be casted to give it smooth surface.
- The mould for making solid blocks should be slightly tilted to give the curve shape and if the blocks are made of cement and sand.
- The solid blocks for the supper structure could be out of mad or mixture of cement and sand at ratio 1:6.
- Mix the aggregate properly before and after pouring water then use the mould for casting the block.
- Allow it to set will curing with water for two to three days.

Placing the Slab over pit:

Place the concrete slab over the pit lining and seal the two with mortar to deny access for flies and rodents and to reduce smell. Ensure that orientation of the slab is correct and towards prevailing winds.

Prepare Superstructure Foundation

- Mark area around the pit according to shape of design latrine's super structure.
- Dig out the surface soil in the marked space for foundation.
- Use stone masonry or bricks cement mortared to build foundation course to level of slab.

Construction Perimeter wall:

- Prepare cement mortar in ratio of 1:6(1 part of cement and 5 parts of sand) and that building the first course of blocks.
- Leave a gap of 60cm wide for door and continue on building to height of 2.00m

Action 7: Making Lentil for Circular Shape latrine

- Cut 6mm diameter reinforcement bar in length of 0.9m, 0.8m and 0.15m tie with bidding wire to form a triangle shape.
- Then cut additional bar in length of 0.5m, 0.4m and 0.2m place them on top of triangle shape bars at distance of 25cm and tie with bidding wire.
- Prepare a formwork in similar triangle shape out of timber in size 0.9m x 0.8m x 0.15m and cast concrete mixture in ratio 1:2:3 (1 part of cement to 2 parts of sand and 3 parts of gravel).
- Cure it with water for few days before placing it on the wall above the gap left for door.

Action 8: Installation of Vent Pipe

- The commonly used pipe is PVC of 110mm diameter and 2.5m long with its top capped with mosquitoes screen.
- It should be firmly fixed to the cover slab at its base and to the superstructure.
- Stainless steel or fiber glass could be best choice for screen to control flies.

Action 9: Casting Ferro-cement Roof

- The prefabricated mould for casting domed shape ferro-cement roof can be made out of PVC, fiber glass or plastic sheet supported by timber.
- Place the prefabricated mould on top of the perimeter wall; smear the top part with used engine oil, making it ready for casting concrete roof.
- Reinforcement bar of 6mm diameter or barbed (spiked) wire could be used for reinforcement.
- When using 6mm diameter bar, cut 5.5m, 3m and 1m, tie each of them to form a different circle.
- Cut additional 4 bars in length 8.5m and other 4 in length of 4.25m, tie them alternatively to the biggest circle and then placing the medium size circle 20cm from the first one and tie it to the vertical bars with bidding wire.
- Finally put the smallest circle to the top and tie it so that the whole structure shows dome shape.
- Mix the cement and sand in ratio of 1:3 the cast the roof.
- Cure it with water and allow the mixture to set for 2 day before removing the mould.

Action 10: Making the door

- There many materials which can be use for making the door, for example; used cement, old sacks, plastic or iron sheet.
- To provide good ventilation, the door upper part should be 25cm from lintel/ roof of latrine. This enables cold-heavy air to enter the latrine through the upper part of the door.
- Make sure that minimum light penetrates the latrine through the door, this will prevent flies using squat hole for escaping instate of vent pipe.

Provide hygiene and sanitation messages / health education

Health Education regarding the five hygiene and sanitation issues.

IEC Materials

- Billboards
- Posters
- Leaflets
- Stickers and
- Other media channels.

Monitoring and Evaluation

- Mapping
- Sanitary inspection
- House card

Annex A: list of participants

No.	Name	Agency/ institution	Position/title
1	Dr.Zemui Alemu	MOH/	Director, Community and family Health
2	Dr. Kesete Araya	MOH	Head, Env. Health Unit
3	Dr.Yonathan Habtom	MOH	Zonal health Director SRS
4	Isaak Meharighi	MOH	Saniterain, Maekel Zone
5	Yemane Andemaraim	MOH	
6	Ram Koirala	UNICEF	Chief, WES section
7	Selamawi Seyum		
8	Selamawit Tekie	MoH	
9	Birikti Teclezion	RSCE	
10	Aman Solomun	RSCE	
11	Muhamed Abdelwase		
12	Tesfasion Ghirmay		
13	Ghebre Alemseged		
14	Birhane G.kidan		
15	Kiflay Kidane	Anseba ,Administration	
16	Bereket Goitom		

No.	Name	Agency/ institution	Position/title
17	Tsehay G.yesus		
18	Manna Yohannes	MoH	
19	Alem Dirar	CESVI	
20	Buruna Sironi	Manitese	
21	Efrem Medhane		
22	Dr. Yonathan Mebrahtu	MoH	
23	Atwebirhan Ghebru	Zoba Administration	
24	Dr. Tesfaelm G.kidan	MoH	
25	Mohamed M. Salah		
26	Mebrahtu G.mariam		
27	Ghirmay Yosef		
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29	Tesfai Keleta	GB - Administration	
30	Dr. Ismael Mohamed Jemal	NRSR	
31	Freweni Negash	Haben	
32	Frewini Berhe	MoH	
33	Tsegazeab Habtemichael	MoH	
34	Eyob Zemui		
35	Filmon Teklay		
36	Okbaab H.Silasie		
37	Hagos Milkias	MoH	
38	Kidanemariam Tecberhan		
39	Tekeste Asgodom	NRSR Administration	
40	Aseghedom Ghebrehiwot		
41	Tania Celivski	Italian Cooperation	
42	Rahel Ghezai	UNICEF	
43	Abrahm Tecleab	UNICEF	

Annex B: list of Technical Team

No.	Name	Agency/ institution	Position/title
1	Dr.Zemui Alemu	MOH	Director, Community and family Health
2	Dr. Kesete Araya	MOH	Head, Env. Health Unit
3	Ram Koirala	UNICEF	Chief, WES section
4	Rahel Ghezai	UNICEF	Social Mobilization officer WES
5	Mathew Binyri	UNICEF	WES Project officer
6	Aman Solomon	RCSE	
7	Manna yohnnes	MOH	Sanitarian, NRSR

Annex C: List of Acronyms

MOE	Ministry of Health
MOH	Ministry of Health
IEC	Information Education Communication
NRSR	Northern Red Sea
SRSR	Southern Red Sea
RCSE	Red Cross Society of Eritrea
PHAST	Participatory Hygiene and Sanitation Transformation
UN	United Nations
UNICEF	United Nations Children's Funds
WASH	Water Sanitation Hygiene

Annex D: TOR

Enhancing PHAST with Implementing Guideline for a wider water and Sanitation Coverage

Background

Only less than 3.6% of the rural population compared to 60% in the urban and an overall 22% national population has access to safe and adequate sanitation. Poor sanitation coverage has resulted in the persistence of many faecal-oral diseases and contributed to contaminated surface and underground fresh water resources. Water borne and water related diseases are major causes of public health problems in Eritrea. In 1995 only water born and water related infections accounted more than one fifth of the total illness reported in the country for out patient health care. This includes skin diseases, diarrhea and eye infections. Diarrhea alone accounts for about 13% of the overall disease burden of the country. There is also an apparent seasonal influence with an increase of water and hygiene related diseases being reported in July to December following the rainy season. By and large, the risk factors for diarrheal diseases are linked to poor hygiene and sanitation practices.

The main reasons attributed to for such low sanitation converge in the rural communities are:

- Inadequacies in people's awareness of the benefits for improved hygiene and sanitation practices such as use of latrines and hand washing.
- Low community capacity in terms of resources and technical knowledge to build single household hygiene and sanitation facilitates.
- While in most cases women are the main actors in taking care of the usual household chore their involvement in planning and management of hygiene and sanitation have been limited
- A systematic data base fore the selected parameters on hygiene and sanitation has been lacking

Over the last few years much has been done by Ministry of Health and its partners such as UNICEF to increase sanitation coverage focusing on the rural and peri-urban communities. To this end Participatory Hygiene and Sanitation Transformation - PHAST has been adopted as a tool for hygiene and sanitation promotion and translated in to three major local languages of the country. While the methodology if properly carried out seeks to achieve improved hygiene behaviors, prevent diarrhoeal diseases and encourages community management of water and sanitation facilities by demonstrating the relationship between sanitation and health status, increasing the self-esteem of community members and empowering the community to plan environmental improvements and to own and operate water and sanitation facilities. However experience in implementation of the PHAST methodology proved that the need to revisit the tool and enhance the implementation guideline in view of making it focused mainly on

- Establish linkage with water supply interventions and managements system
- Create the necessary data base and reporting mechanism
- Building of hygiene and sanitation facilities especially latrines

A three day workshop is therefore been proposed to be carried out in Massawa on 29th of September to 1st of October 2004. Accordingly this term of reference is prepared to outline the objective and other details for the workshop.

Objective of The workshop

- To revisit the PHAST methodology and prepare implementation guideline for hygiene and sanitation promotion in Eritrea

Duration: November 4th, 2004 through November 6th, 2004

Arrive: Evening or First Day

Stay for 3 actual working days

Depart: Evening of the Third Day

Venue: Red Sea Hotel, Massawa.

Suggested Resource persons

1. Dr. Kesete Araya, Env. Health Unit, MOH
2. Mr. Ram Koirala, WES, UNICEF
3. Mr. Mana NRSR, Sanitarian, MOH
4. Mr. Mathew/ Mahmud –UNICEF
5. Rahel Ghezai –UNICEF

Suggested List of Participants

1. Women Representatives from the six Regions
2. Environmental Health Unit
 - National staff from Ministry of Health
 - Gash Barka Sanitarian
 - Anseba Sanitarian
 - Northern Red Sea Sanitarian
 - Southern Red Sea Sanitarian
 - Debub Sanitarian
 - Maekel Sanitarian
3. Water Resource Department
4. Ministry of Education
5. Department of Infrastructure
 - Gash Barka Representative
 - Anseba Representative
 - Northern Red Sea Representative
 - Southern Red Sea Representative
 - Debub Representative
 - Maekel Representative

6. UNICEF
7. UNHCR
8. NGOs
 - COSV
 - CESVI
 - MANITese
 - HABEN
9. ECDF- Engineering and Project Implementation –Water and Sanitation

Required Materials (from UNICEF)

- Copies of “0” draft of the implementation guideline
- Copies of PHAST – step by step guideline
- Flip chart strands 2
- Flip Chart Paper, Roll-4
- VIPP Boards-3
- Digital camera and Video