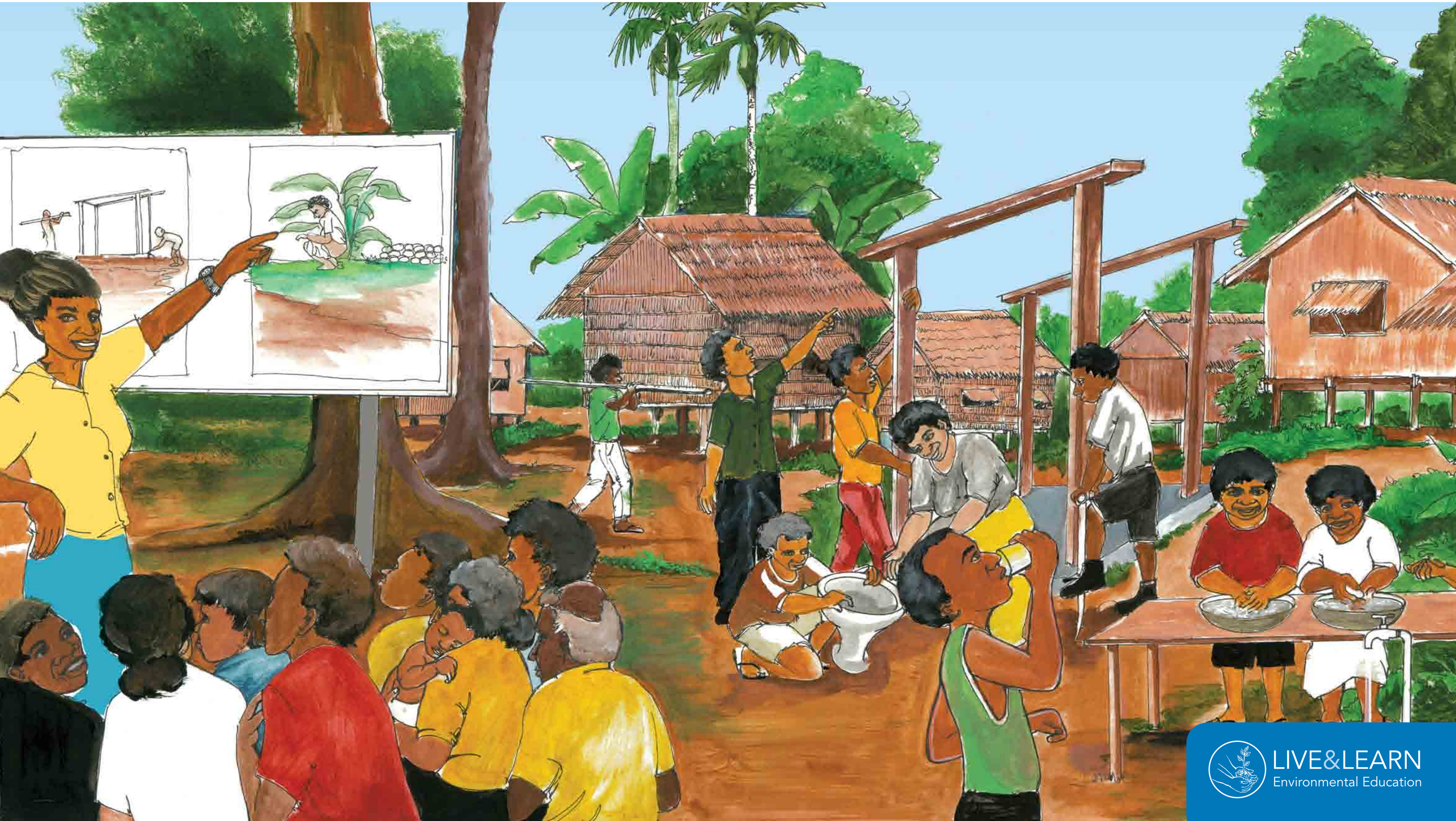
Discovering healthy living

Participatory Hygiene and Sanitation Transformation (PHAST) in Pacific communities



LIVE&LEARN
Environmental Education

Introduction for facilitator

Welcome!

This flipchart is a simple 'tool' that can be used to improve sanitation and hygiene practices and reduce conditions such as diarrhoea. It can be used by NGO workers, government extension officers or health workers for use in Pacific communities.

The desired outcome is increased demand for and action towards improved sanitation (e.g. construction of new or improved toilets), and improved hygiene practices (e.g. handwashing and protecting water from contamination).

This flipchart is part of a set of resources to support the development of community-based solutions to sanitation needs in the Pacific islands. Details of other resources can be found on page 24.

How to use this flipchart

We highly recommend that you read and familiarise yourself with the entire flipchart prior to using it. The flipchart presents two participatory approaches:

(i) Participatory Hygiene and Sanitation Transformation (PHAST)

(ii) Community-Led Total Sanitation (CLTS)

You can use this flipchart from either side (it has two front covers). One end is PHAST and the other is CLTS. Facilitators will need to decide whether the PHAST or CLTS approach is most appropriate or likely to achieve results in a village. It is possible that a combination of the two approaches will be most useful.

Facilitator's notes appear throughout the flipchart and provide extra information to assist in planning of activities and sessions.

The role of facilitator

To facilitate means to 'make things easy'. Your role as a facilitator is to foster the learning process by creating an environment conducive to sharing ideas and experiences. You do not have to be an expert on the topic of discussion, but it is worth understanding the flipchart materials in the context of the local community.

Tips for the session:

Establish the 'ground rules' before the discussion. The following ground rules are suggestions only. You might like to add or delete ground rules to make them more relevant to your group. It may be helpful to display and refer to these at each session.

- Keep it positive.
- One person speaking at a time.
- Participate in the group and share your ideas.
- Keep the discussion on track.
- Be an active listener – pay attention to a speaker and ask questions to ensure you understand.
- Respect everyone's opinion: especially people who may be shy or feel marginalised, like elderly, youth or women.
- Ask if you don't understand.
- Let others have a chance to speak.
- Be gender sensitive –– acknowledge women's and men's different needs.

There is no one right answer

The activities in the flipchart are open-ended. This means that there is no correct answer or result. Decisions made by the group reflect what is right for the group and what it is prepared to take responsibility for.

How to cope with difficult or dominant people

The facilitator needs to ensure that others have the opportunity to speak. If someone is dominating the discussion try saying 'those are interesting points. Let's go round and see what others think'. You could introduce a quota system, in which each person is given three stones or bits of paper, and they have to give one up every time they speak. When they have no more, they cannot speak again! If the dominant person is a community leader, approach them formally or privately early in the planning phase, explain the process, and try to gain their support.

Managing conflict

Sometimes people will have strong and conflicting ideas on a subject. Poor relationships within the group will also affect the way the group works together. You need to be sensitive to possible differences and tensions and encourage people to work through these, keeping their common goals and interests in mind. If the conflict is not related to the topic being discussed, ask the people involved to meet after the session to resolve the issue.

If discussions get heated, you can implement the 'time-out' rule, where the group stops talking and listens to the facilitator for instructions on the next session.

CLTS or PHAST?

PHAST seeks to help communities improve hygiene behaviour and encourage better community management of water and sanitation facilities. It achieves this by demonstrating the relationships between sanitation and health, building confidence and empowering community members to take ownership of water and sanitation facilities, and to plan improvements. PHAST is about creating understanding, and attempts to link this understanding to real action.

CLTS does not aim to 'teach' about good sanitation practices and is less about developing knowledge and understanding about sanitation and health. Instead, it aims to lead communities to 'discover' the need for better sanitation. The activities are intended to generate feelings of shame, disgust and unhappiness with current sanitation and to provoke urgent collective local action. CLTS is mostly relevant for villages where open defecation is common practice, and aims to create villages that are 'open defecation free.' It is not to be used in conjunction with programs that provide free or subsidised toilets for communities.

Use the table below to assess whether you should use PHAST or CLTS. Ticks in both columns could indicate that a combination of both approaches could be used. Never use CLTS if it is likely to lead to violent conflict. However it may be very effective in motivating action if it causes people to feel shame or embarrassment. Use your best judgement and change approaches during your program if required.

Situations that may exist in your village	**Which flipchart would be appropriate?**	
	PHAST	**CLTS**
Sanitation is a sensitive topic and may lead to feelings of shame and embarrassment, but it's not likely to lead to violence	✓	✓ CLTS is ideal in this situation
Sanitation is an extremely sensitive topic in the village. Highlighting certain issues could lead to violent conflict within or between families, or towards you (the facilitator)	✓	✘ Avoid CLTS in this situation
Most people in the village already use some kind of toilet	✓	✘
Hygiene is the main issue that must be dealt with	✓	✘
The village has done PHAST training before	✘	✓
The program also involves providing the village with free or subsidised toilets	✓	✘
The village has toilets but many people don't use them	✓	✓

Local sanitation business

If your village has a local sanitation business, this flipchart can be used as a valuable tool to increase demand for better water, sanitation and hygiene facilities. If appropriate, use this resource to promote the services of the enterprise.

Activity 1: Health problems activity

Aim:

To help village members identify important health problems in the community and determine which of them can be prevented through community action.

Materials:

- None

Step 1:

Show the group the picture of the nurse or traditional healer; choose whichever is relevant in the community.

Say to the group:

- *The people pictured are coming to visit the health post or traditional healer*.

Step 2:

Show the group the picture of the family. Ask each person to choose one member of the family and suggest a reason why the person might visit the health centre.

Step 3:

Once everyone has shared their ideas ask the group;

- *Are there any health problems that we have forgotten about?* (If no one mentions water-related illness you many need to mention diarrhoea.)

Step 4:

Make a list of all the health problems mentioned. For each problem on the list, ask the group:

- *Why do people suffer from (state the problem)?*
- *How could this problem be prevented?*

Step 5:

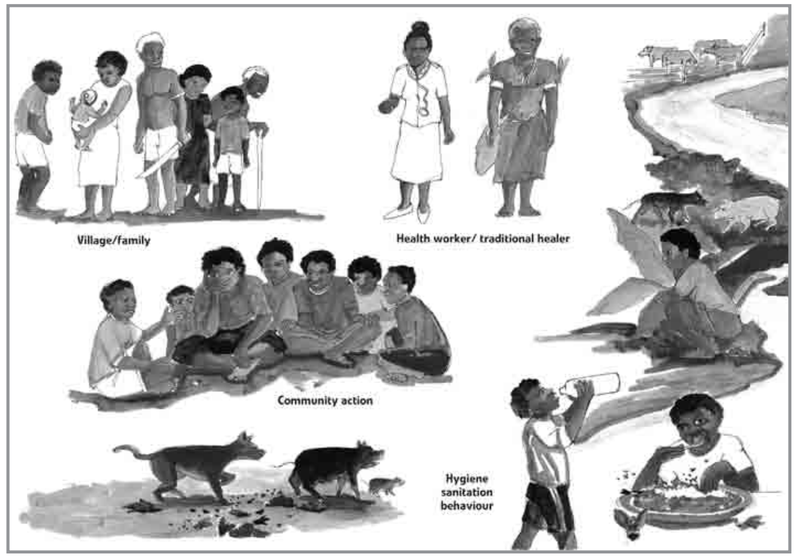
Show the group the picture of the community meeting. Ask the group:

- *Which health problems can be addressed by community action?*

Step 6:

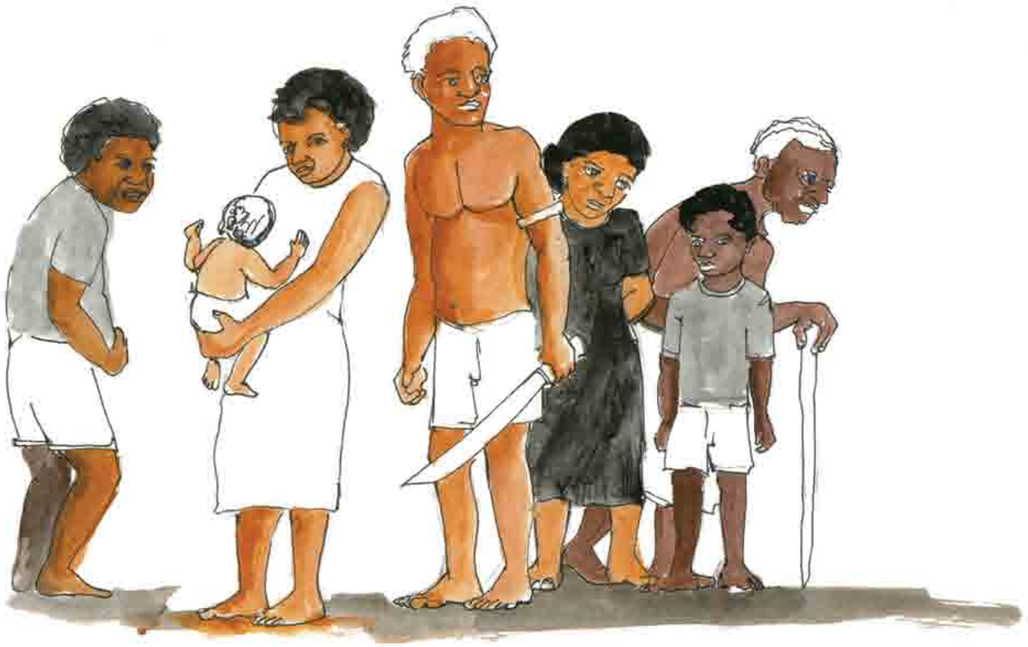
Show the group the picture of the sanitation and hygiene actions. Ask the group:

- *Of the health problems that can be addressed by community action, which are caused by current water, sanitation and hygiene practices?*



Common health problems

Illness	Transmission / Symptoms
Typhoid	Illness caused by a type of bacteria. It is transmitted by food or water contaminated with human waste from an infected person.
Diarrhoea	Having frequent loose or liquid faeces (human waste). It is a symptom of infection caused by bacteria, virus or parasites spread by contaminated water.
Giardia	Infection of the bowel caused by a parasite. Transmitted by food or water contaminated with faeces (human waste) from an infected person. It causes stomach pain and diarrhoea.
Scabies	A highly contagious condition that causes an itchy rash, often in several members of the same household. This is common where there is a lack of clean water for personal hygiene.
Trachoma	An infection in the eye that may result in blindness after repeated re-infections. This is common where there is a lack of clean water for personal hygiene.
Malaria/ Dengue Fever	Spread by mosquitoes that breed in water. People's closeness to water where insects breed is an important factor in the spread of these diseases.
Cholera	Infectious disease caused by contaminated food or drinking water. It causes diarrhoea, stomach cramps, vomiting and dehydration.



Village/family

Health worker/traditional healer

Community action

Hygiene
sanitation
behaviour

Activity 2: Mapping community water & sanitation

Aim:

To map the village's water and sanitation conditions and show how they are linked, while creating a shared community understanding.

Materials:

(See Facilitator's note)

- Newsprint (if available)
- marker pens
- locally available materials such as cotton, buttons, small stones, sticks, shells, beads and small scraps of material etc.

Step 1:

Say to the group:

Make a map of your village. You can do this any way you like. Here are some materials to start with and you can add to these anything else you want to use.

Step 2:

Tell the group that they need to include these things on their map:

- important physical features and boundaries
- roads, paths
- housing and other buildings, such as schools, churches, health facilities, businesses
- gardens, forests, plantations
- water sources–rivers, wells, streams, taps, etc.
- sanitation facilities (toilets or latrines)
- places where people may go to the toilet in the open
- animal enclosures/fences
- waste disposal sites.

Step 3:

The group can take a short walk to get an idea of where these things are located. However, most of the time should be spent on creating the map. If you are unable to do this walk due to weather, or long distances, you can visualise the area instead.

Step 4:

When the map is completed, divide the group into two. Ask the first group to imagine that they are visiting the village for the first time.

Ask the remaining group to take the role of guides. Their task is to take the group of visitors around the village.

Step 5:

Ask the guides to use the community map to take the visitors on a tour. Show the visitors as much as possible, including the water, sanitation and hygiene arrangements, and help them to understand what life is like here.

Encourage the group playing the visitors to ask questions about what they are being shown, to make sure the guides have shown them every aspect of life, both good and bad.

Step 6:

Once the tour is complete ask the combined group the following questions:

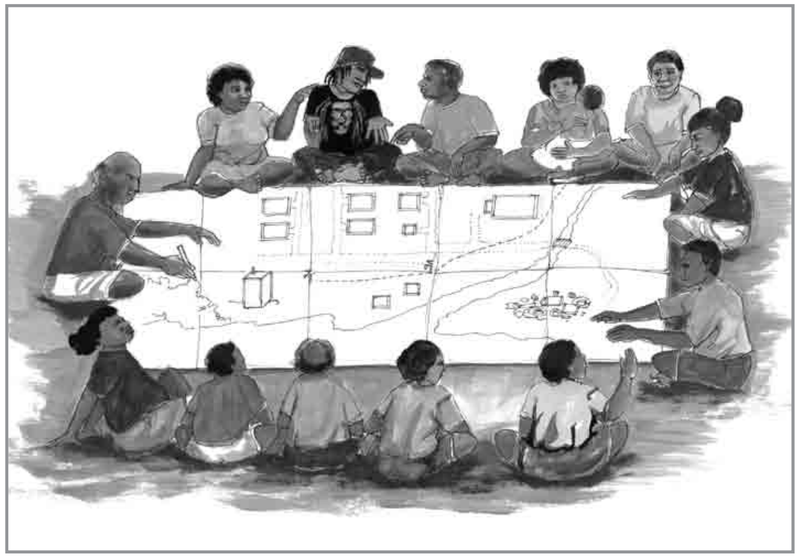
- What problems were identified? (These could be marked on the map.)
- Are there any water and sanitation arrangements that are working well? Why or why not?

Step 7:

Explain to the group that in future activities there will be a chance to discuss how to overcome these problems. Ideas should be recorded so that they can be reviewed later.

Step 8:

If possible, store the map safely for reference during other activities.



Facilitator's note:

If you do not have large sheets of paper easily available you can create the map on the ground, using local materials. You can sketch an outline of the village boundary with a stick, and then fill in the roads, houses, water points etc. using shells, rocks, or branches. However, you should sketch the final map onto a piece of paper so that it can be kept and referred to in future activities.

This is a very powerful activity to reveal the current situation in any community. Be mindful of the questions that you ask and how this activity is presented so that participants don't 'hide' the real situation in their community.

There is a recommended distance between toilets, and toilets and animal enclosures. This is 30 metres.

Activity 3: Good and bad hygiene behaviours

Aim:

To discover and exchange ideas about common hygiene and sanitation practices according to their good or bad impacts.

Materials:

- large sheets of newsprint (paper)
- coloured pens or marker pens.

Step 1:

Ask people to form small groups. Give each group a set of materials.

Step 2:

Show the groups the pictures of common sanitation/hygiene behaviours. Display the flipchart in a place where everyone can see it.

Step 3:

Ask each group to discuss which of the sanitation/hygiene behaviours they believe are:

- ***Good:*** *those which you think show activities that are good for health*
- ***Bad:*** *those which you think show activities that are bad for health*
- ***In-between:*** *those which you think show activities that are neither good nor bad for human health, or which you are not sure about.*

Step 4:

Ask each group to draw a table with 3 headings: 'good', 'bad' or 'in-between'. Each group should identify and write down the numbers of the pictures which belong in each of the categories. Each group should then explain why they placed the pictures in each category.

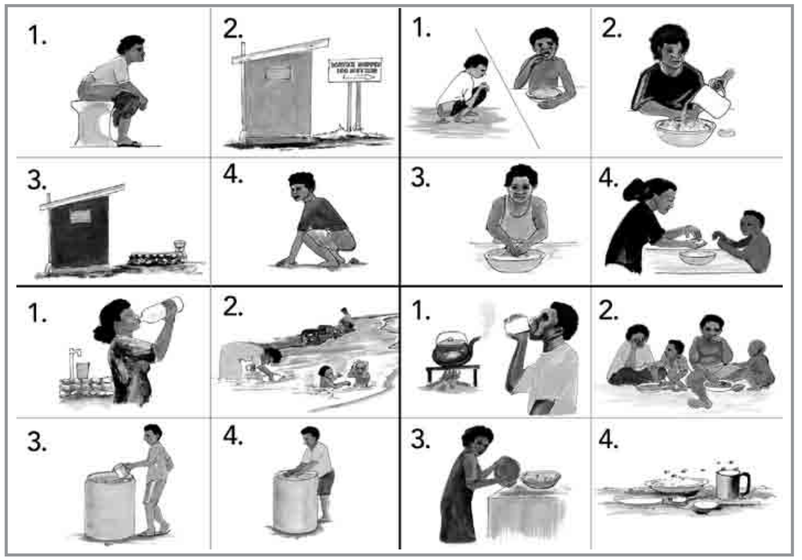
Step 5:

Ask people to think about how people behave in their own village:

- Which of the good behaviours are regularly practised?
- What other good behaviours (not shown in the pictures) are practised?
- Which of the bad behaviours are commonly seen?
- What other bad behaviours (not shown in the pictures) are practised?
- How did the behaviours that we see in our village (good and bad) come to be this way?

Facilitator's note:

The aim of showing the pictures of good and bad behaviours is to encourage people to think about and reflect on their own experiences. It is to provide a starting point for a discussion about local hygiene and sanitation beliefs and practices.



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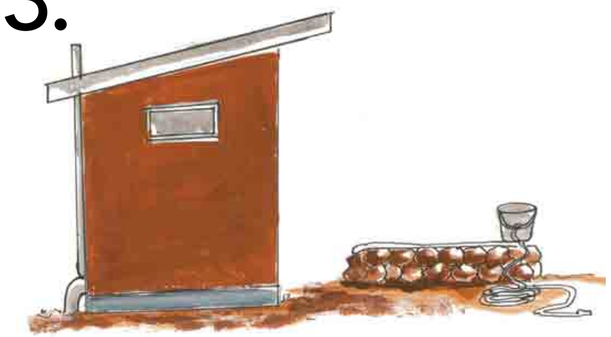

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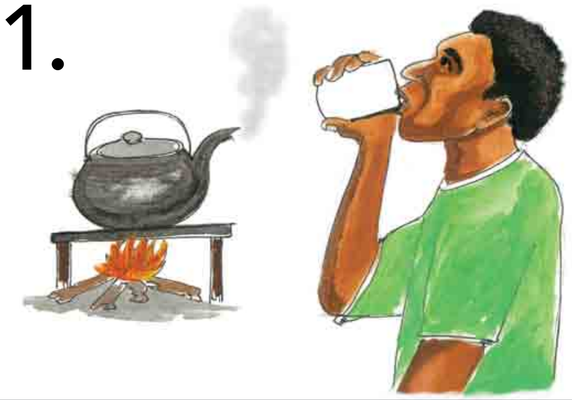

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Activity 4: How diseases spread

Aim:

To help participants discover and analyse how diarrhoeal disease can be spread to other people through the environment.

Materials:

- large sheets of newsprint (paper)
- coloured pens or marker pens
- sticky tape.

Step 1:

Ask the participants to form small groups. Give each group a set of materials.

Step 2:

Point to the picture on the flipchart that shows a person going to the toilet in the open or an unclean toilet (whichever is appropriate) and the picture of a person eating.

Step 3:

Tell the group the remainder of the images represent ways in which human waste can come into contact with a person.

The images show Six 'Fs':

- Fingers – a person's hand
- Feet – on shoes or bare feet
- Flies – and other insects
- Fields – crops or gardens
- Fluid – water
- Food – eating or drinking

Step 4:

Ask the groups to make a diagram by copying the drawings from the flipchart, to show the different ways human waste might get from the source to the person's mouth.

Ask them to use arrows between the different drawings to show the various pathways.

Step 5:

When the groups have made their pictures, ask each group to show and explain their picture to the other groups. (The completed diagram should look something like the diagram in the top right corner.)

Step 6:

Ask the group to consider and discuss the common behaviours in their own village. Ask them to identify the;

- transmission routes that occur in the community
- problem areas and hygiene
- behaviours that are putting people at risk of infection.

Diarrhoeal disease and disease transmission

Diarrhoea is commonly caused by eating food or drinking water that is contaminated with human waste.

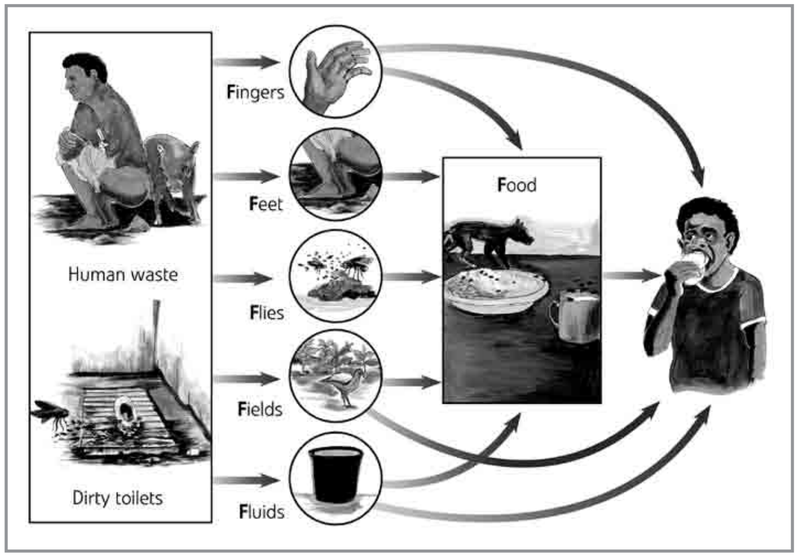
Infants may suffer from diarrhoea after being hand-fed by someone with dirty hands, or after having put dirty objects into their mouths.

The diagram above shows the usual ways diarrhoeal germs reach people: via fingers, flies (insects), fields, fluids and feet, to food, or directly into the mouth. Because of the use of so many 'F' words in English, it is often called the 'F-diagram'.

Don't be worried if the groups do not produce a picture that looks like this. It is important that they identify some of the ways diseases can be spread.

Facilitator's note:

Some participants may at first be shocked at the content of this activity. There may be some disbelief that faeces (human waste) can be transmitted to the mouth. The best way to deal with this situation is to get the group working together as quickly as possible. Members of the group who acknowledge the issue can help others to accept the idea.



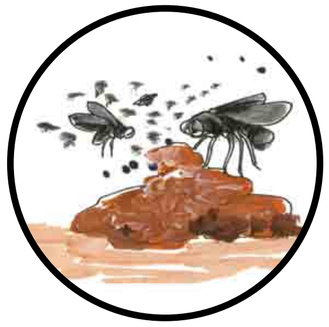
The above diagram shows the pathways of human waste contamination. From human waste/dirty toilets – through the Six Fs, to food and then the mouth.

Human waste

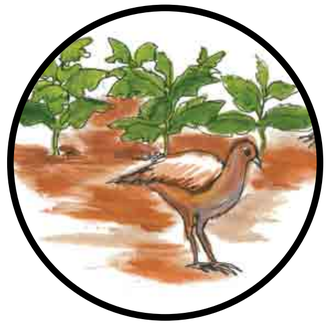
Dirty toilets

Fingers

Feet

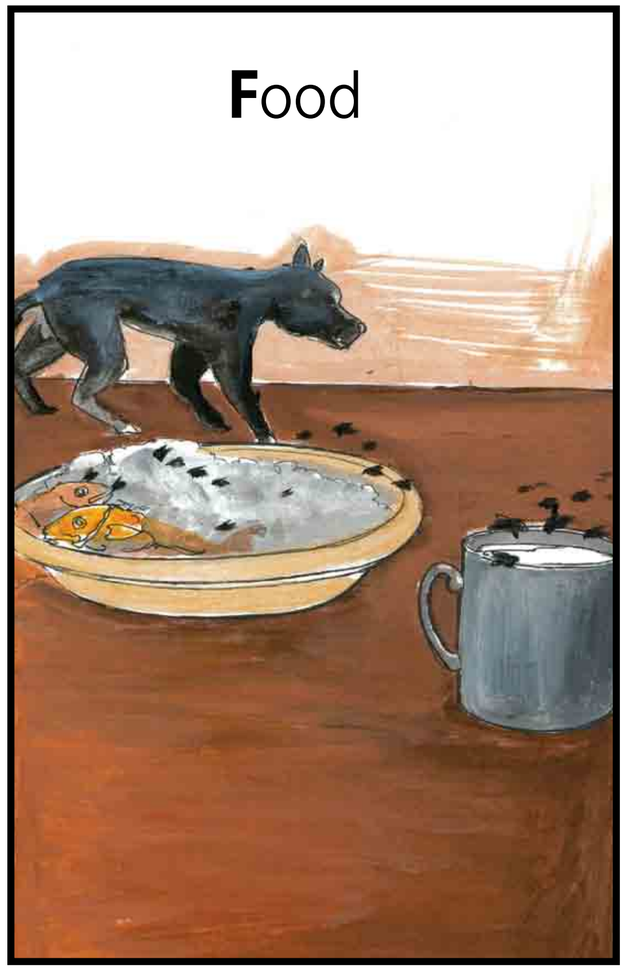


Flies



Fields

Fluids



Activity 5: Blocking the spread of disease

Aim:

To identify the actions that can be taken to stop the spread of disease.

Materials:

- large sheets of newsprint (paper)
- coloured pens or marker pens.

Step 1:

If there has been a break between this activity and the previous one (How diseases spread), go over what was learned in the earlier session.

Step 2:

Ask everyone to continue working in the same small groups as in the earlier activity, using the pictures they made last time.

Step 3:

Tell the group:

'Now that we know the ways in which faeces (human waste) [use appropriate local word] can be taken in by mouth, we need to think about what can be done to stop this from happening.'

Step 4:

Show the group the pictures on the front of the flipchart. The pictures show the 'Blockers' (actions that can be taken to stop the spread of disease).

Step 5:

Ask each group to look at the pictures of the 'Blockers' (actions that can be taken to stop the spread of disease) and decide where they could put them on their 'How diseases spread' picture to stop or block the different pathways of human waste.

Step 6:

The groups should copy the drawings and add them to the appropriate place on the picture they created in the previous activity.

Step 7:

After 30 minutes, ask each group to present their picture, which now includes the blockers, or barriers.

Step 8:

Discuss with the group what they have learned during this activity. Ask them to identify what actions they can take in their own community to prevent the spread of disease.

Step 9:

Create a list of the actions identified by the community. Keep the list to aid action planning in later activities.

Facilitator's note:

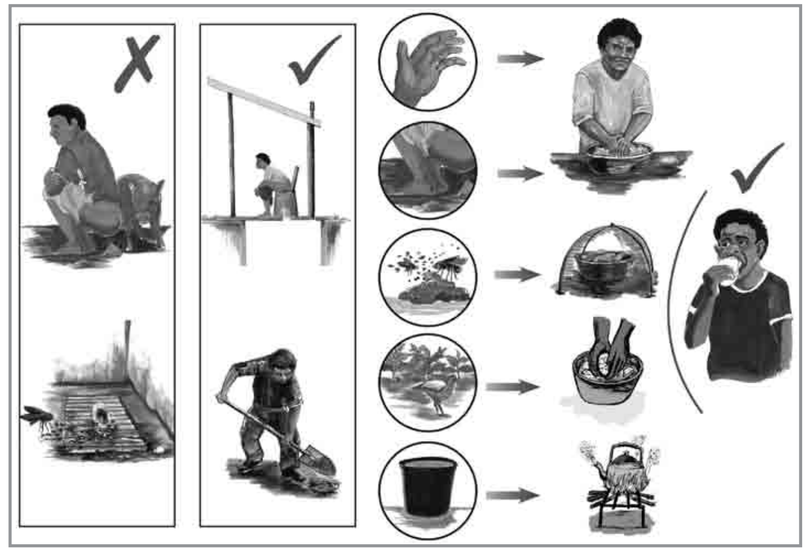
This activity follows on from and builds on the How diseases spread pictures produced in the previous activity.

The groups may want to change or add to some of the routes that they drew before. This is fine.

The group may also want to create its own blockers if the existing drawings do not cover all situations.

It would be a good idea to put the final pictures up on the wall of the community centre (or other meeting place).

It is important to stress the importance of washing hands with water and soap, as this is the best way to prevent transmission of disease.



The above diagram shows the 'Blockers' of human waste contamination, using a toilet or burying waste, handwashing with soap, covering food and water, washing food and boiling water.

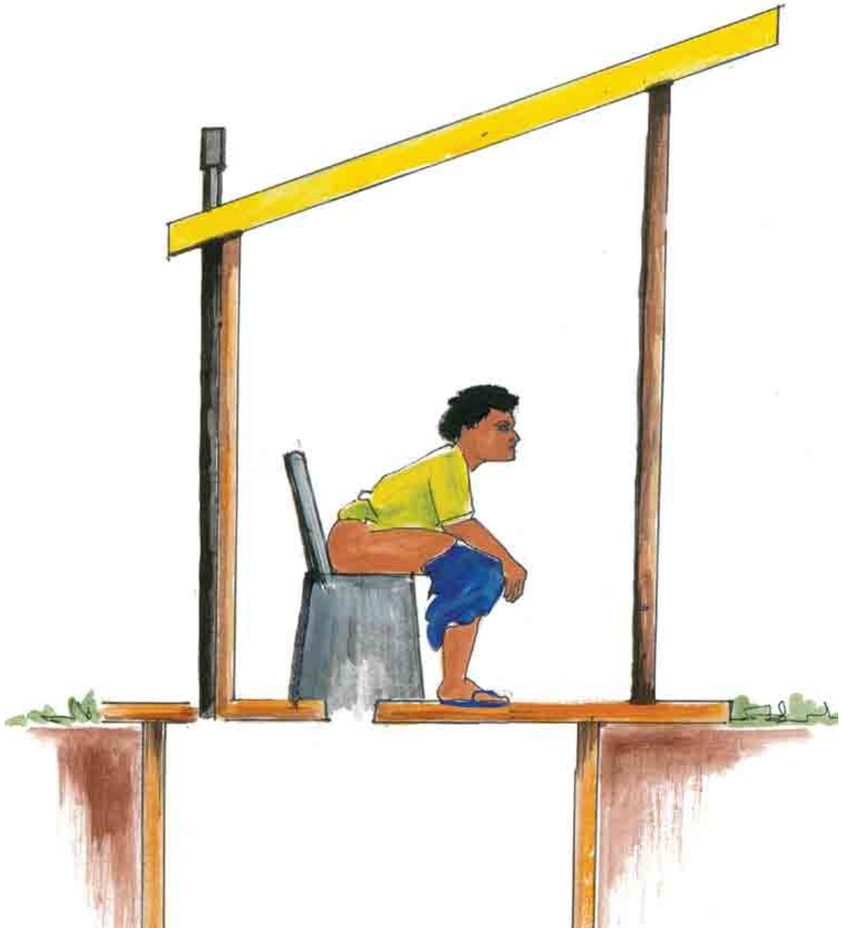
Preventing the spread of disease

The best way to prevent diarrhoeal disease is to block the spread of germs.

Good sanitation needs both good facilities and behaviours.

The following three personal actions will lead to the greatest reduction in diarrhoeal disease.

1. Safer disposal of human faeces (waste), particularly those of babies, young children and people with diarrhoea.
2. Handwashing after going to the toilet, after handling babies' faeces, before feeding and eating and before handling food.
3. Keeping drinking water and food free from contamination both in the home and at the source.



Activity 6: Sanitation improvements

Aim:

To help participants:

- describe the community's sanitation situation
- identify options for improving sanitation
- discover that improvements can be made step-by-step.

Materials:

- large sheets of newsprint (paper)
- coloured pens or marker pens
- sticky tape
- scissors
- community water and sanitation map created during Activity 2.

Step 1:

Ask the participants to form small groups. Give each group a set of materials. Show the pictures of sanitation options on the flipchart, making sure that everyone gets a close look.

Step 2:

The picture shows many toilet options. As all these options will not be suitable or available to every community, the groups may need to work through the table on the next page, discussing their options. Once the groups have identified options that are suitable for consideration they can move on to the next step.

Step 3:

Ask the groups to roughly redraw each suitable sanitation option. Encourage them to also draw other sanitation options or practices that they know about that are not already in the flipchart. When finished they should cut their pictures out.

It is a good idea for the groups to assess their village's current sanitation situation so that realistic goals can be set. The community water and sanitation map created in the *Mapping community water and sanitation* activity on page 6 can be useful here.

Step 4:

Ask each group to draw a set of steps. Then ask each group to arrange their cut out sanitation options and place them on the steps, starting with the option they consider worst at the bottom and ending with the best sanitation option at the top step. They must use all the suitable options they identified previously.

Step 5:

Ask the groups to identify which step best represents the village's current sanitation situation. Then ask each group to identify which step best represents where they would like move to, one year from now.

Step 6:

Encourage each group to explain their sanitation steps to the other groups. Invite discussion using questions:

- What are the similarities and differences in the sets of steps drawn by the different groups?
- What are the advantages of the 'best' options?
- What difficulties or obstacles could make moving up the steps difficult?
- What information is needed to select the best option?

Step 7:

Allow all participants to work together to agree on one set of sanitation steps, including the option that they aspire to achieve in one year.

Step 8:

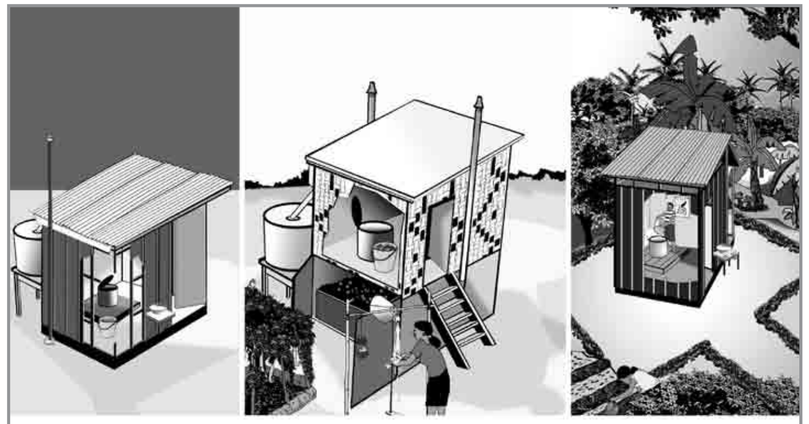
Explain that the next two activities will help them to develop a plan to get from where the village is now to where it would like to be in the future.

Facilitator's note:

The sanitation steps show that improvements can be made step by step.

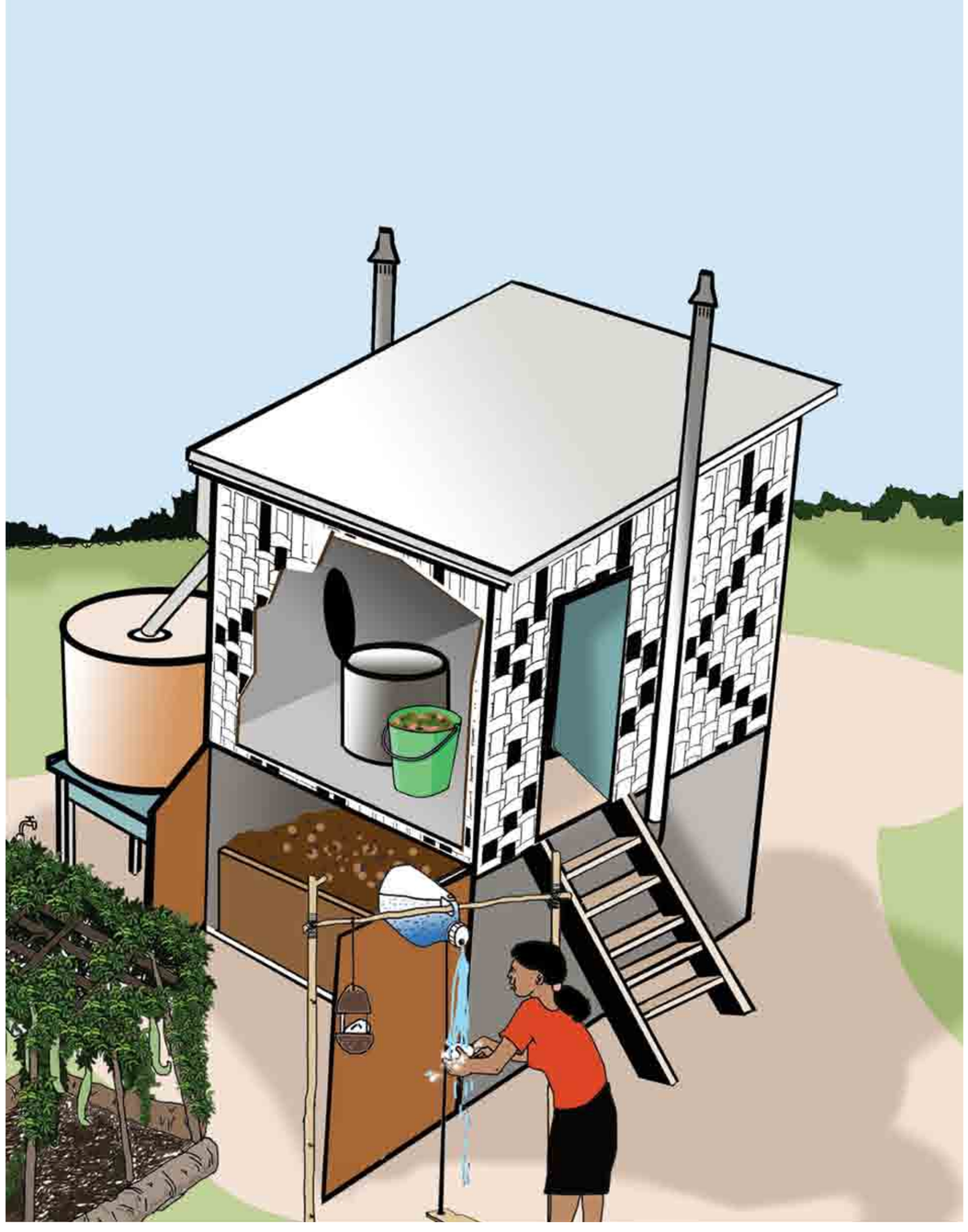
The idea that the community can progress up the steps at different rates can be very appealing to groups. They realise that changes can be made over time, at a pace that is appropriate and manageable for them.

When groups discover this, it can inspire them to become more involved.



Ventilated Improved Pit toilet | **Compost toilet: double chamber** | **Pour flush toilet**

Ventilated Improved Pit toilet



Compost toilet: double chamber

Pour flush toilet

Activity 7: Toilet options

Aim:

- To help participants understand the different sanitation options available and enable them to choose the most appropriate toilet technology to suit the conditions of each location and the people's needs.

Materials:

- None

This page shows a range of toilet options from simple to high-tech and wet and dry toilets. It is important choose the right toilet technology to suit the conditions in each location and the people's needs.

Step 1:

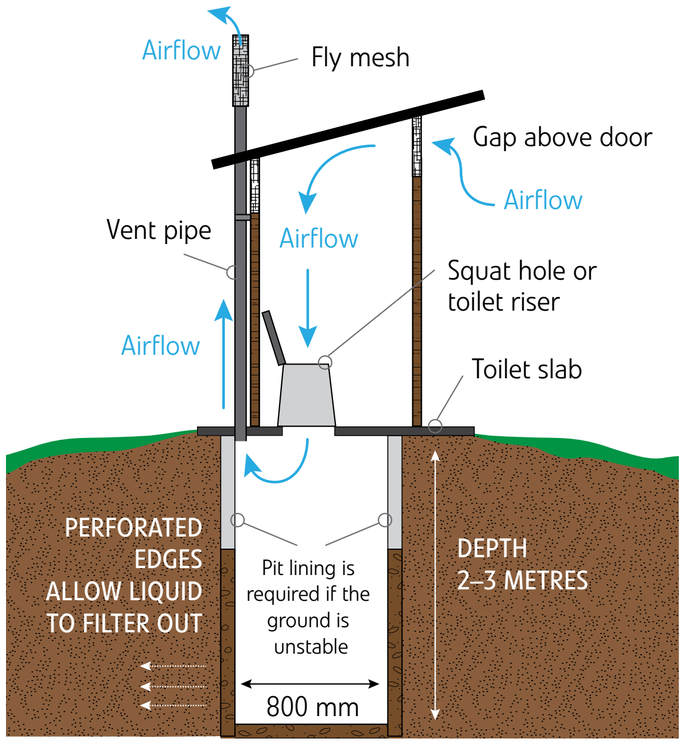
Ask your group to suggest the advantages and disadvantages of each design. They can come up with a list.

Step 2:

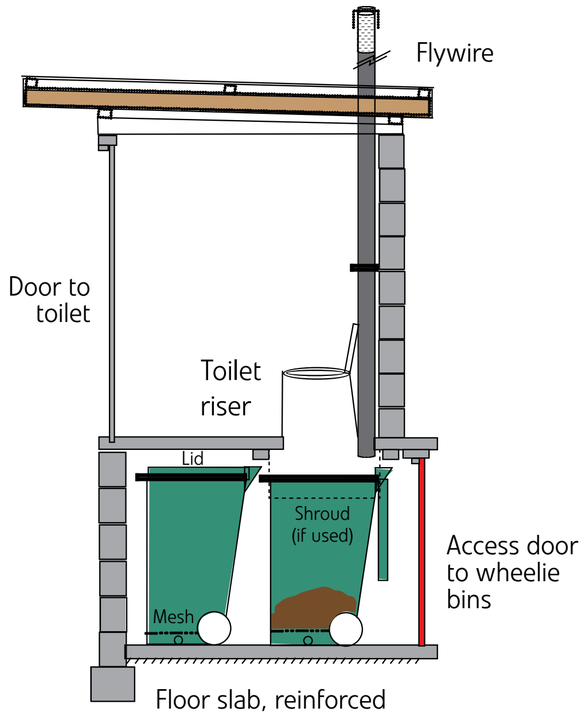
After they are finished, participants can check their responses against the table below. There are a number of factors to consider when choosing the most appropriate toilet to suit everyone's needs. Flush toilets may be considered the preferred sanitation service. However, flush toilets may not be appropriate where water is scarce or people cannot pay water costs. In this case, it is important to raise awareness of the various design elements of the other options, such as compost toilets.

Toilet options	When is this the best option?	Important points to consider	Advantages
1. VIP toilet with seat and vent pipe	Good entry level when cost is main concern.	• Not good in high water table areas • Does not control mosquitoes in the pit • Extra cost of providing vent pipe • Need to keep interior relatively dark • Odours from the pit can enter the toilet room on still mornings and nights • May not meet the social aspirations of users when other more 'advanced' toilets are installed in the area (e.g. water seal or flush toilets) • Toilet paper and leaves can be used without blocking. Not hard materials. • With added seat riser, this meets local status needs	• Low cost • Can be built by householder • Needs no water for operation • Easily understood • Control of flies and significant reduction of smell inside toilet room
(Compost toilets) 2. Single chamber with two wheelie bins 3. Double chamber	Good when it has been planned for and money saved or loan arranged for cost. Good when there is a lack of water or risk of flooding or high water table.	• Organic matter (or ash) must be regularly collected and stored in the toilet for use • Users must understand and control the addition of organic matter to ensure proper composting • Same construction cost as septic systems • Users have to overcome discomfort about emptying composted toilet wastes from the chambers, every 6–18 months • The toilet room is elevated above the ground, so access may be difficult for elderly or disabled	• No water is needed • Has high storage volume so can last longer • No smell in the toilet room when properly maintained • Suitable for large family = 10 people composting • Can be attached to a house • Groundwater & soil pollution is prevented by the sealed chamber • Can be located anywhere, chambers sit above ground. Requires no digging of pits. • A valuable compost is produced for soil conditioning • Permanent structure with no need to rebuild/move when full
4. Pour flush toilet	Good when there is plenty of water available and no risk of polluting groundwater. Moderate savings required.	• Needs a reliable water supply • Unsuitable where solid anal cleaning material is used • Potential groundwater pollution • Seat over pit: Must move toilet room each time new pit dug	• Low cost • Control of flies and mosquitoes • Absence of smell in toilet room • Contents of pit not visible • Offset type: Gives users the convenience of a flush toilet • Offset type: Toilet room can be inside house if pit offset, and no need to move toilet room each time pit fills • Offset type: Toilet seat/riser is supported by ground • Can be upgraded by connection to sewer if sewerage becomes available
5. Septic tank toilets	Good if cost not a consideration and access available to specialist installers and service contractors for pump out.	• Costly to install • Needs reliable and adequate water supply (piped) • Not suitable if only a small yard area for trenches • Can pollute groundwater if high water table or trenches are not designed and installed correctly • Needs occasional costly desludging with septic truck • Sludge cannot be reused as fertiliser • High cost to maintain • Lots of high service items	• Convenience and status of flush toilet • No smell or insects in toilet room • Can be located inside the house • Easy to clean

Dry toilet options

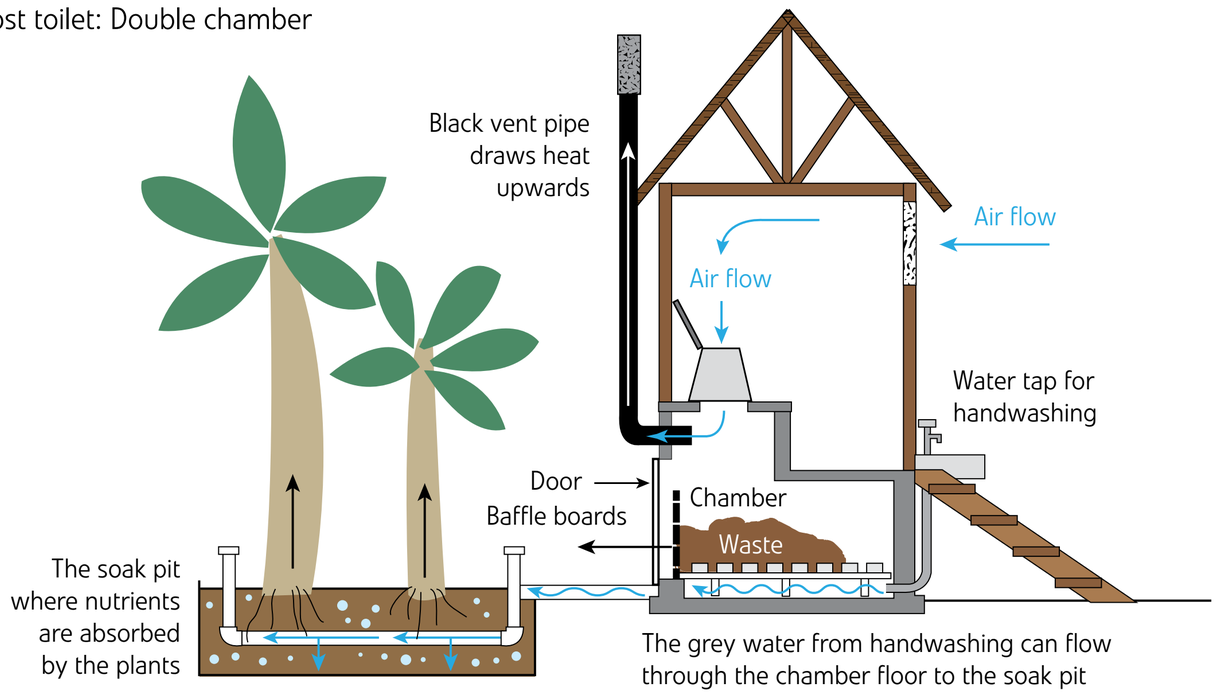


1. VIP: Ventilated Improved Pit toilet

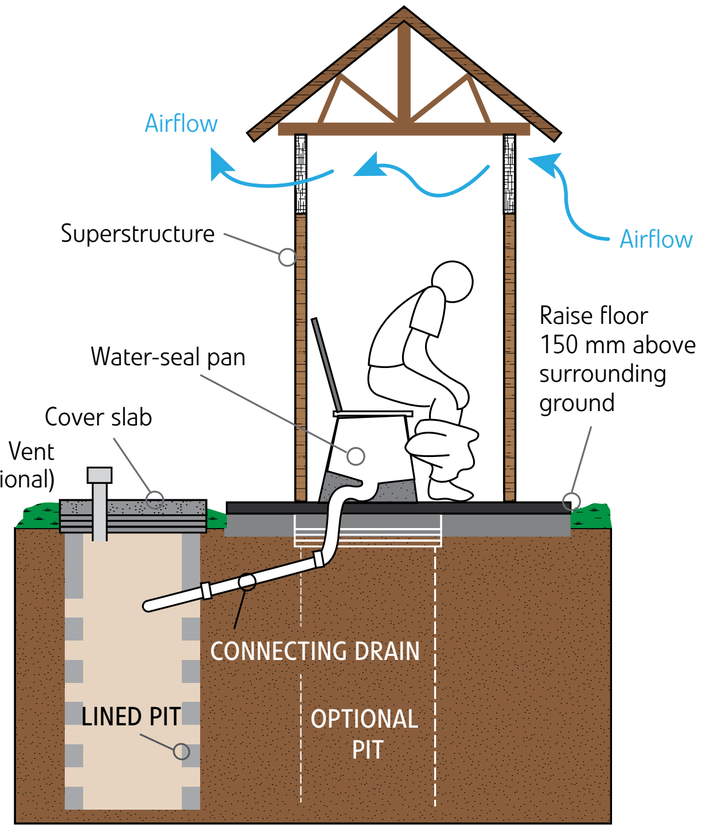


2. Compost toilet: Single chamber with two wheelie bins

3. Compost toilet: Double chamber

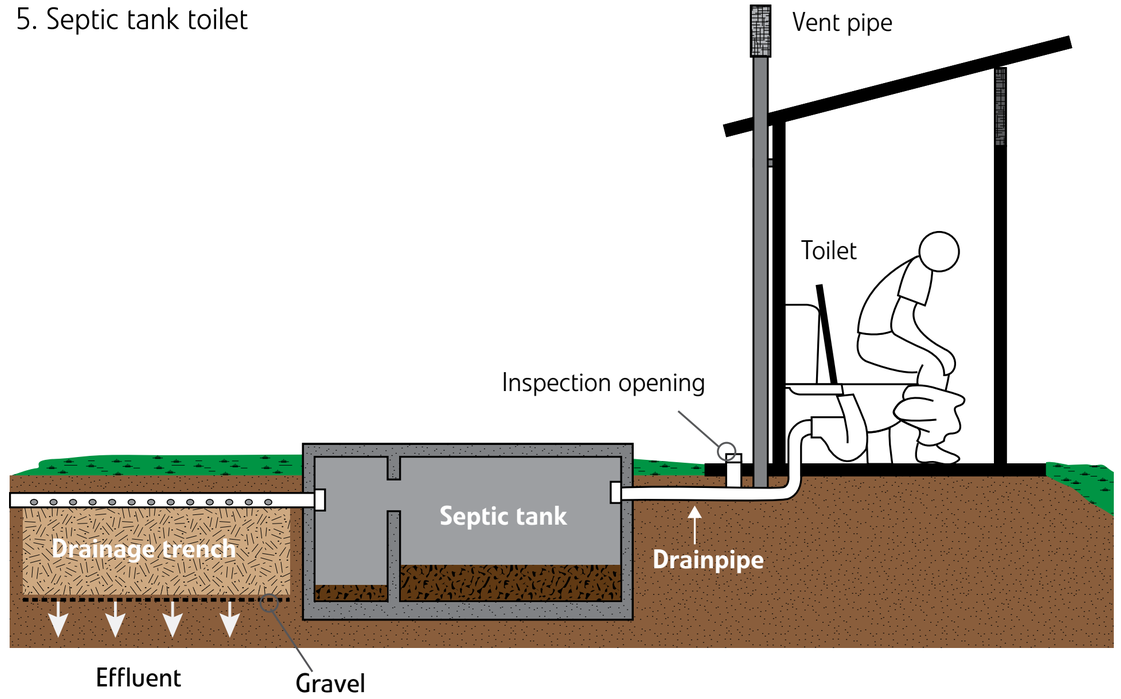


Wet toilet options



4. Pour flush toilet

5. Septic tank toilet



Activity 8: Choosing improved hygiene behaviours

Aim:

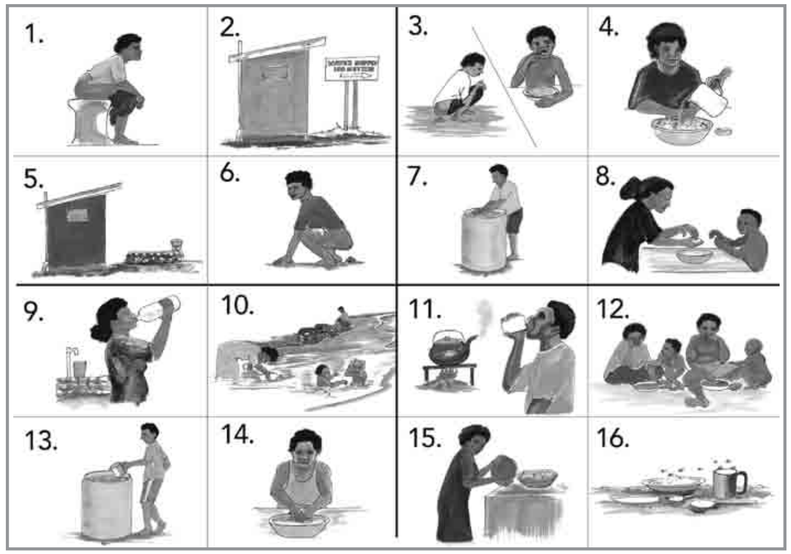
To help village members identify hygiene behaviours that they want to change, encourage, reinforce or introduce into the village.

Materials:

- large sheets of newsprint (paper)
- coloured pens or marker pens.

Step 1:

Divide participants into smaller groups. Return to the *Good and bad hygiene behaviours picture* in Activity 3 on page 8.



Step 2:

Ask each group to choose one or more hygiene behaviours that they agree on as being healthy and which they would like to encourage. Then ask each group to select one or more behaviours that they agree are unhealthy and which they would like to discourage.

Step 3:

Give the groups enough time to select their hygiene behaviours and then ask each group to explain their selection.

Step 4:

Hold a discussion aimed at:

- Reaching an agreement about which good and bad behaviours are the most important to work on.
- Deciding how to influence the community to:
  - use good practices all the time
  - accept new behaviours
  - stop bad practices.

Step 5:

Record the hygiene behaviours that participants decided to work on. These will be the focus of the planning activity.

Step 6:

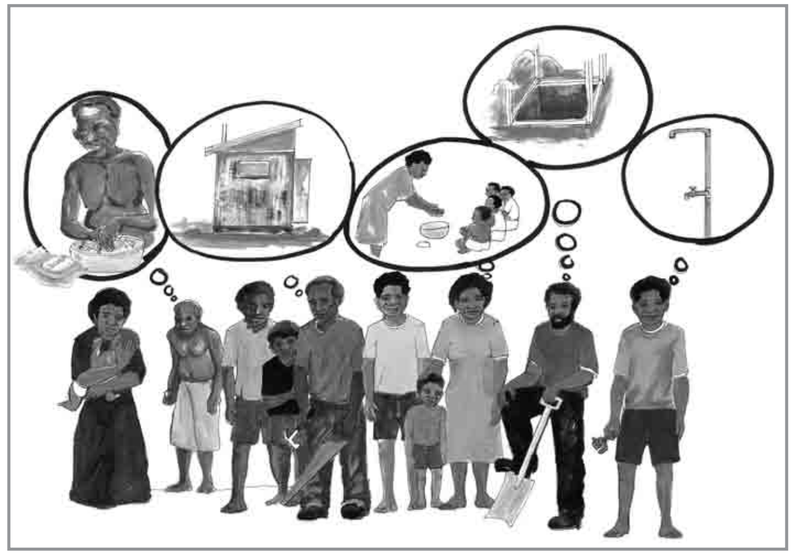
Ask participants to sort their selected hygiene behaviours into either:

- easy to do
- in-between
- hard to do.

Step 7:

For the actions identified as in-between or hard to do, ask participants to create a list of 'barriers' or things that may make a new action harder to do. For example – washing your hands after going to the toilet is a very effective action to improve hygiene, however it may be hard to do if the community does not have access to soap.

From this list choose one or two behaviours participants want to focus on. Use this list when carrying out the planning activity on the following page.



Facilitator's note:

Past experience has shown that programs that include changes both in hygiene behaviours and in facilities are more effective in controlling diarrhoeal disease than those that only include changes to facilities.

There is often a tendency to concentrate more on physical facilities, so this activity aims to make sure that hygiene behaviours are not overlooked.


SOAP

Activity 9: Planning for action

Aim:

To help village members to set goals, to identify available local resources and to develop a step-by-step plan for community action to reach these goals.

Materials:

- large sheets of newsprint (paper)
- coloured pens or marker pens
- string
- paper footprints (optional)

Step 1:

Before the session, prepare four posters that illustrate the following:

1. The **sanitation option** that was identified as best for the community during Activity 6, *Sanitation improvements* on page 14. Write 'Future' on the top of this drawing.
2. The **sanitation option** that the group identified as reflecting the current situation with sanitation during Activity 6, *Sanitation improvements* on page 14. Write 'Now' on the top of this drawing.
3. The **hygiene behaviours** the group identified as being healthy and which they would like to encourage from Activity 8 *Choosing improved hygiene behaviours*. Write 'Future' on the top of this drawing.
4. The **hygiene behaviours** the group identified as being unhealthy and which they would like to discourage in Activity 8 *Choosing improved hygiene behaviours* (also write 'Now' on the top of this drawing).

Step 2:

Review Activity 6, *Sanitation improvements* and Activity 8, *Choosing improved hygiene behaviours* with the group. Remind them of the decisions they made. Display the four drawings to the group that you prepared before the session.

Step 3:

Split the group into 2 small groups. Give one group the two **sanitation drawings** (now and future). Give the second group the two **hygiene behaviour** drawings (now and future).

Step 4:

Ask each group to lay their two posters on the ground with the 'Now' drawing to the left and the 'Future' to the right and join them with a piece of string running between them like a bridge (see flipchart illustration).

The aim of this exercise is to come up with a plan to get from the 'now' drawing (situation) to the 'future', while considering the barriers, resources available and the steps needed.

Step 5:

Ask each group to identify the potential barriers to the community moving from one situation to the next. Write a list of the barriers and place the list underneath the 'Now' drawing.

Step 6:

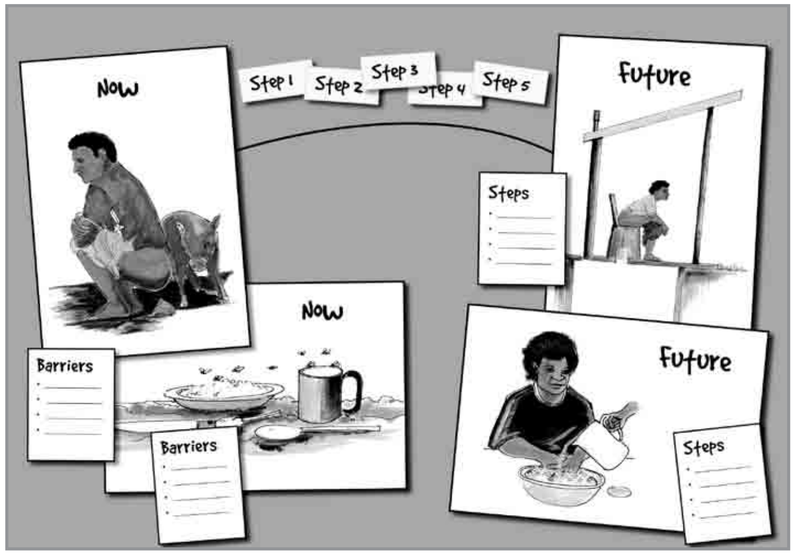
Ask each group to discuss available resources such as materials, skills, people (village leadership.) Write a list of these resources and place it between the 'Now' and 'Future' drawings as shown on the flipchart.

Step 7:

Ask the group, *What is the first step that you can take towards reaching your future goal?* Start a list of steps and place them under the 'Future' drawing. The group should continue to discuss a step-by-step plan of action. Add each step to the 'step' list. You might like to write each step individually and place them as a 'chain' reaching from the 'now' drawing to the 'future' poster as shown on the flipchart.

Step 8:

Ask members of the group to summarise what they accomplished in this planning session and if possible record their plans. Set a time to meet again to continue to talk about the action.



Existing groups

The group should also consider who should take the action. Most villages have existing groups that people belong to. If considering collective action, the participants should be encouraged to think about the role these groups could have. Existing groups could include:

- Women's groups
- Church groups
- Registered business collectives or associations
- Water committees

Sanitation enterprise

If your village has started a sanitation (toilet building) enterprise, this is an opportunity for the members to promote their services to the village.

Step 1

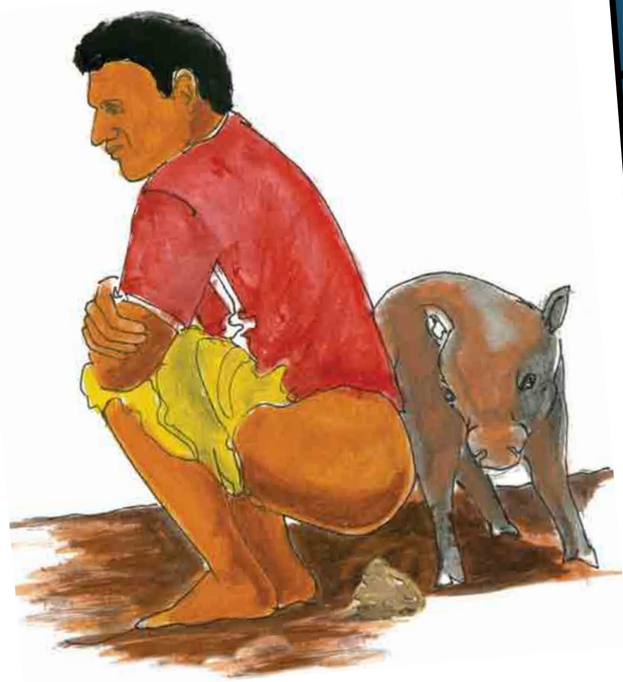
Step 2

Step 3

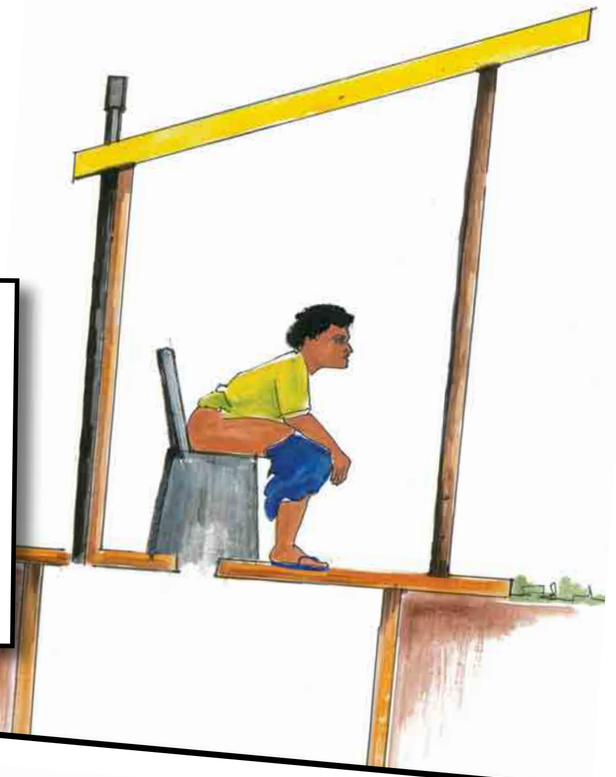
Step 4

Step 5

Now



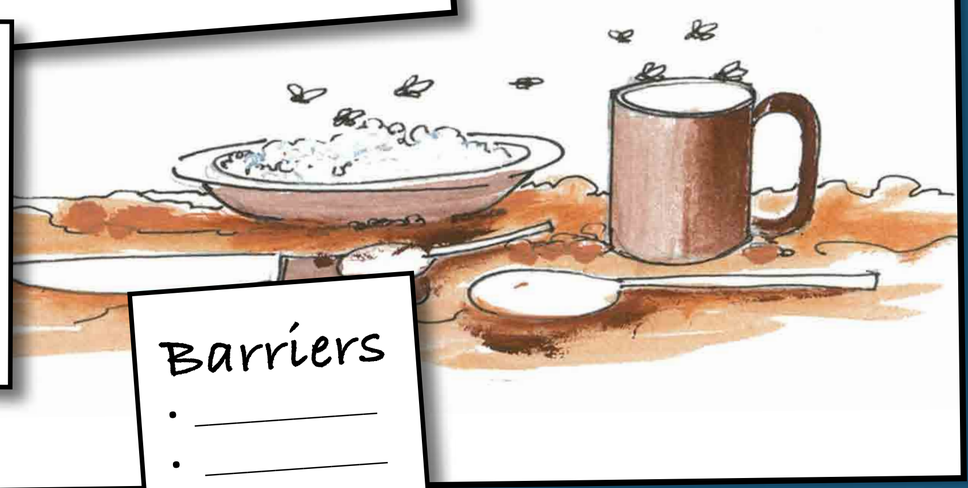
Future



Steps

- _____
- _____
- _____
- _____

Now



Barriers

- _____
- _____
- _____
- _____

Barriers

- _____
- _____
- _____
- _____

Future

Steps

- _____
- _____
- _____
- _____

Optional activity: Testing for contamination

Aim:

To allow people to use a simple and effective test to discover for themselves if their water is contaminated with faeces. This activity can be used at any time throughout CLTS or PHAST to highlight the safety of a community's drinking water.

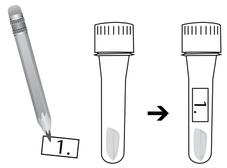
Materials: H_2S test kits

Step 1: Fill in the details

a. Fill in sample number and date on a sticker or sticker strip label and stick on the sample bottle.

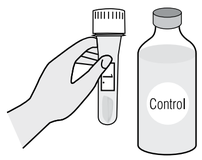
b. Record your sample number, date, time, location and description of the water sampled.

c. Record any other information e.g. turbidity (how cloudy the water is), smell, source of pollution, faulty pump, etc.



Step 2: Collecting the control

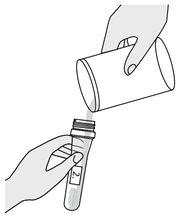
a. A control is used to compare the colour change in the test samples, and to ensure that the sample bottles are not contaminated before use. A control is a sample that you know for sure should not be contaminated. You need to collect the control only once for each monitoring programme.



b. Collect a sample of uncontaminated water e.g. distilled water, boiled water, bottled water, water treated with chlorine. This is to be used as the control. There may be a slight change in the colour of the sample to a pale yellow or light brown due to the colour change of the reagent. This is normal.

Step 3: Collecting the water samples

Using the test bottle, collect water from the usual source where water is collected for drinking (e.g. spring, stream, well, tank or tap).



3.1 Water from the roof

a. Collect water from the roof in the rainy season in a very clean container; make sure you don't collect rain water from the first week of the rainy season as this water is dirtier and is not normally collected for drinking.

b. Fill the test bottle carefully. This is because the test bottle will fill very quickly to the marked line and may overflow. If you do overfill the bottle, do not spill the water out and do not worry. Your result will still be valid.

c. Immediately close the sample bottle.

3.2 Water from your town's drinking water supply

a. Before collecting the sample of drinking water, rinse the container several times.

b. Collect a sample of water from the container by filling the sample bottle up to the mark.

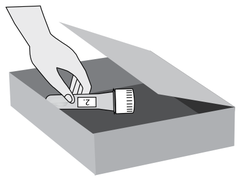
c. Close the sample bottle.

d. Place all the test samples in a dark place at room temperature.

e. Wash your hands!

Step 4: Store the bottles in the dark

a. Do not expose the bottles to direct sunlight. The sun's rays can kill any bacteria.



Step 5: Check your results

- Check your test sample at the same time each day for 3 days for changes in colour. Compare the colour change of the test with that of the control. If both change colour, it may indicate that the sample bottles were contaminated and there is a problem with the test.
- Use the H_2S Colour Code to indicate the degree of contamination.

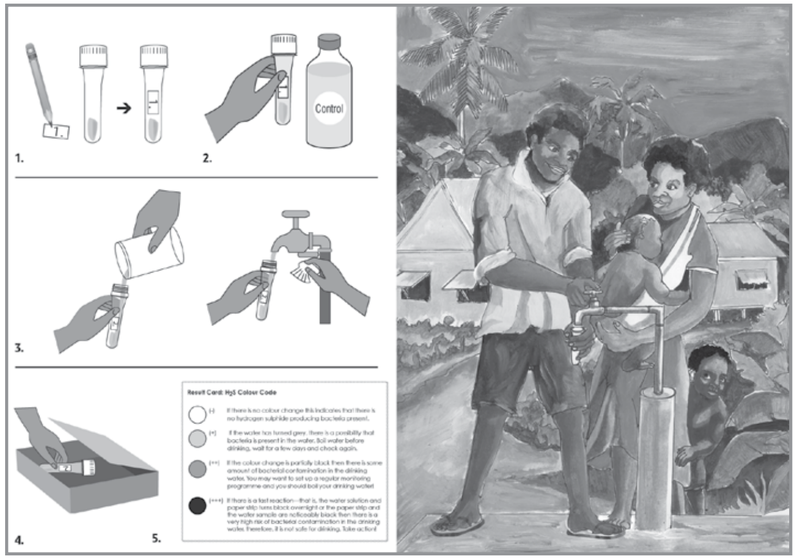
Result Card: H_2S Colour Code

(-) If there is no colour change this indicates that there is no hydrogen sulphide producing bacteria present.

(+) If the water has turned grey, there is a possibility that bacteria is present in the water. Boil water before drinking, wait for a few days and check again.

(++) If the colour change is partially black then there is some amount of bacterial contamination in the drinking water. You may want to set up a regular monitoring programme and you should boil your drinking water!

(+++) If there is a fast reaction—that is, the water solution and paper strip turns black overnight or the paper strip and the water sample are noticeably black then there is a very high risk of bacterial contamination in the drinking water, therefore, it is not safe for drinking. Take action!



Background notes

The H_2S test is a simple test that will tell us if the water being tested is contaminated by bacteria that live in faeces. It will take three days (or less) depending on the amount of contamination. The test identifies if hydrogen sulphide (H_2S) is in the sample.

H_2S is produced by a bacterium that lives in faeces called faecal coliform. Faecal coliform lives in the gut of humans and animals. If it is found in the water it means that harmful bacteria or viruses could also be in the water. If the water being tested changes colour, this means that hydrogen sulphide is present, and also shows the likely presence of bacteria found in faeces. This also means that we need to take urgent action.

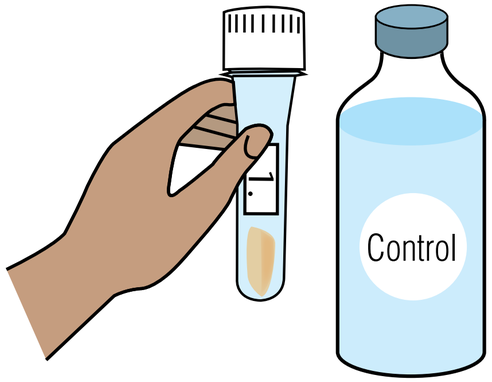
The Hydrogen Sulphide – H_2S Paper Strip Test uses a paper strip to check for contamination from faeces in drinking water sources. The gas that coliform bacteria produce is called hydrogen sulphide (this is the gas that smells like rotten eggs). In order to check for the presence of coliform bacteria in water, a water sample is collected into the test bottle with the paper strip. Special chemicals have been placed on the paper strip. The paper strip will react with the water sample by turning black if it comes into contact with hydrogen sulphide. If the water sample or paper-strip turns black, this indicates that hydrogen sulphide was produced. This means that it is likely that bacteria from faeces are present in the water.

The advantages of the H_2S Paper Strip test are that it is low-cost, does not require samples to be shipped or refrigerated, does not require a laboratory or expensive equipment, and most importantly, it is easy to understand and carry out in the village.

H_2S testing tubes must be used and disposed of using correct and safe procedures. These kits contain bacteria that can be harmful to the health of the user and the environment. We recommend that used tubes should be returned to a safe and approved disposal centre.

For further information see page 24.

1.



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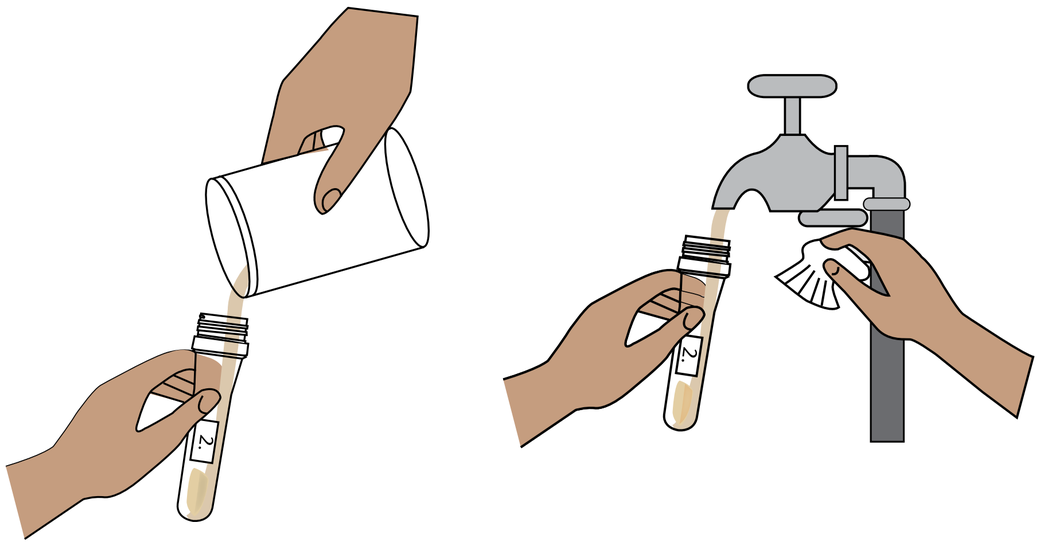

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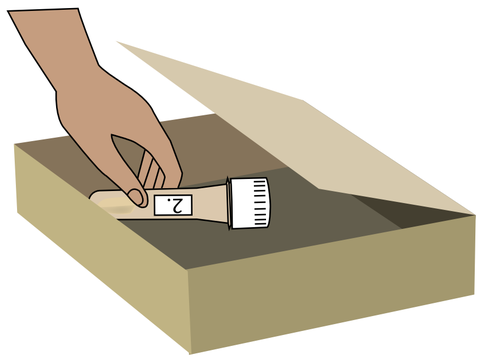
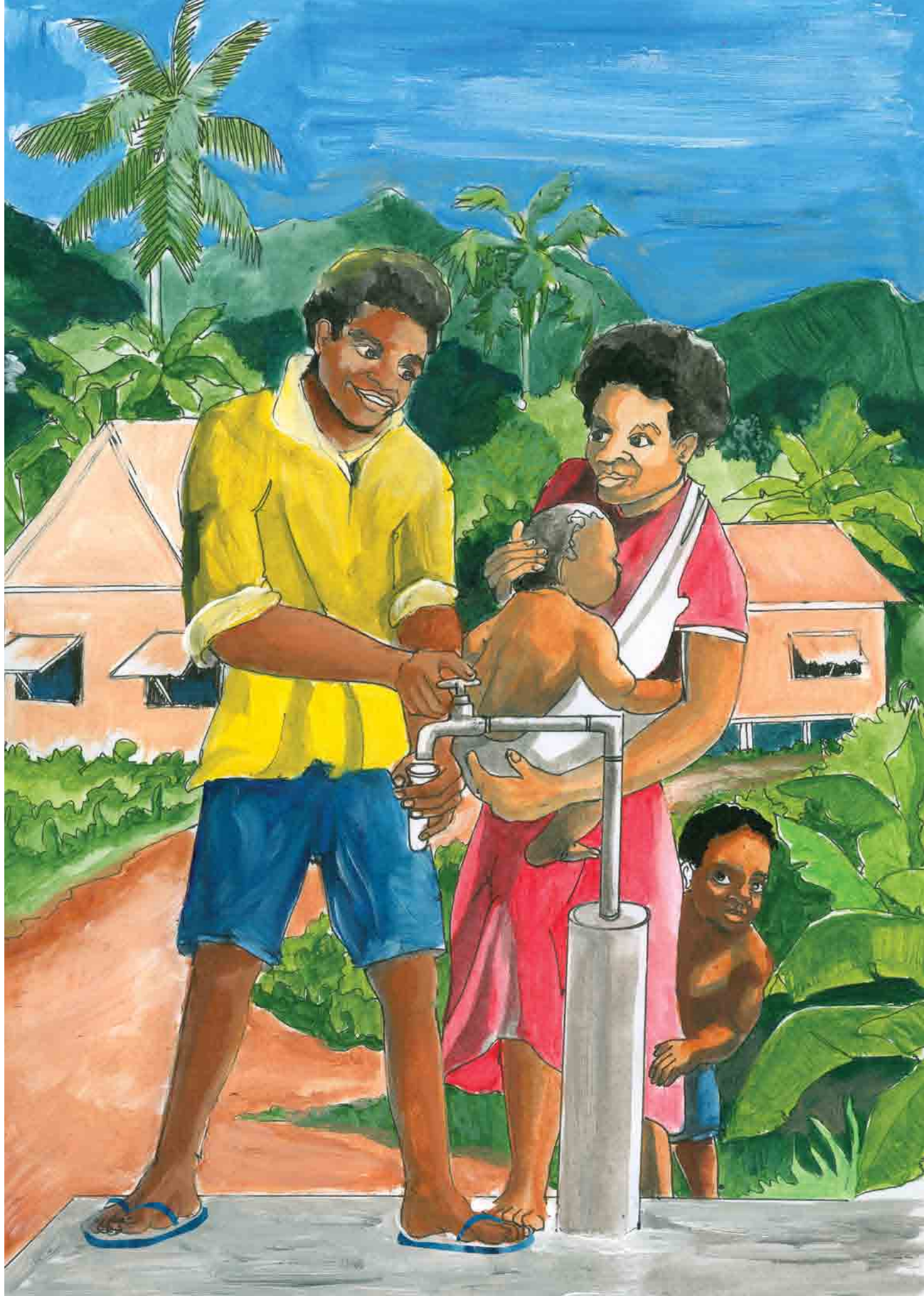


4.

Result Card: H_2S Colour Code

- (-) If there is no colour change this indicates that there is no hydrogen sulphide producing bacteria present.
- (+) If the water has turned grey, there is a possibility that bacteria is present in the water. Boil water before drinking, wait for a few days and check again.
- (++) If the colour change is partially black then there is some amount of bacterial contamination in the drinking water. You may want to set up a regular monitoring programme and you should boil your drinking water!
- (+++) If there is a fast reaction—that is, the water solution and paper strip turns black overnight or the paper strip and the water sample are noticeably black then there is a very high risk of bacterial contamination in the drinking water, therefore, it is not safe for drinking. Take action!

5.



Glossary words

Bacteria: very small living things, some of which cause illness or disease.

Biodegradable: materials, chemicals etc that change naturally by nature into substances that do not harm the environment.

Composting: the process of converting/breaking down plant and animal waste into useful soil additives.

Contamination/contaminant: food, water, soil or air etc that is contaminated has come into contact with a substance that may be harmful or potentially poisonous.

Defecation/defecate: to pass faeces from the body.

Dehydration: losing more fluid from the body than is replaced by drinking.

Diarrhoea: frequent and watery bowel movements; can be a symptom of things such as infection, food poisoning, illness.

Excreta: the solid or liquid waste material that people and animals produce and get rid of from their bodies.

Faecal/faeces: solid waste products from the body.

Faecal-oral route: transmission from faeces to the human digestive system via the mouth.

Fertile: fertile land or soil is able to produce good crops.

Gender: being man or woman, the roles and responsibilities of men and women and how they are expected to behave. Gender roles are changeable between and within cultures.

Germ: a very small living thing that can make you ill.

Groundwater: water that is below the ground.

Health: the general condition of your body and how healthy you are.

Hygiene: clean and healthy practices that maintain good health.

Infection: a disease that affects a particular part of your body and is caused by bacteria or a virus.

Latrine: a small building or structure, usually separate from a house, where people go to get rid of faeces and urine.

Malaria: a serious disease, resulting from the bite of an infected mosquito, which causes repeated high fever and headaches and may cause death.

Menstrual pads: an absorbent item worn by a woman while she is menstruating (see menstruation).

Menstruation: the regular monthly loss of blood and womb lining from a woman of child-bearing age.

Microbes: a general term to describe the many different kinds of microorganisms which can cause diarrhoea and disease.

Nausea: the unpleasant feeling of being about to vomit.

Nutrients: a chemical or food that provides what is needed for plants or animals to live and grow.

Open defecation: defecating in the open and leaving faeces exposed.

Oral: relating to or involving the mouth.

Organic: living, or produced by or from living things.

Organism: an animal, plant, human or any other living thing.

Parasite: a plant or animal that lives, grows and feeds on or within another living organism.

Parasitic infections: infections caused by a parasite (see infection and parasite).

Participatory: a way of organising or doing something, or making decisions etc that involves everyone who will be affected.

Pathogen: a disease-causing organism such as bacteria, virus or fungi.

Personal hygiene: maintaining cleanliness and grooming of our own body. In general, it refers to looking after yourself.

Robust: strong

Sanitation: safe methods to dispose of human faeces, urine and other household waste.

Sanitation enterprises: Demand-driven small businesses that aim to improve sanitation.

Scabies: an infestation of mites in the skin, characterised by small pimples that itch.

Soakage trench: a trench that urine and liquids seep into.

Toilet pan: the part of the toilet that receives the human waste (urine and faeces).

Transmission: the process of sending or passing something from one person, place, or thing to another.

Waste water: water that has been used in homes, industries, and businesses that is not suitable for reuse as a drinking source unless it is treated.

Water-logged: a term used to describe something that is full, or saturated with water.

Wheelie bin: an outdoor rubbish bin on wheels so it can be easily moved.

WASH education in Pacific communities

Live & Learn Environmental Education is working with local communities in the Pacific to establish 'sanitation enterprises': demand-driven businesses that provide sanitation services (such as toilets) to improve sanitation in the Pacific islands. Based on the notion of 'sanitation marketing', the strength and success of these businesses pivots on the value the community places on toilets and improved sanitation.

School and community sanitation and hygiene resources

As part of this process, a suite of educational and community sanitation and hygiene resources have been developed. These include:

- *Discovering healthy living: Participatory Hygiene and Sanitation Transformation (PHAST) in Pacific communities*
- *Putting your waste in the right place: A Community-Led Total Sanitation (CLTS) approach for the Pacific Islands*
- *Building strong and healthy communities: Setting up a sanitation enterprise in your community*
- *Setting up and managing a small enterprise: A guide for the Pacific*
- *Clean communities: A practical guide to building and maintaining toilets in the Pacific islands*
- *Hands up for hygiene! – teaching hygiene behaviour in Pacific schools: Teacher's guide*
- *Germ-buster: Student workbook*
- Posters/board game/stickers

Who can use these resources

These resources can be used by communities, NGOs and governments to improve sanitation and promote hygiene behaviour in the Pacific islands.

How to use these resources

These resources have been designed to complement each other and support the facilitation of a broader participatory approach to improve sanitation in Pacific schools and communities. However, Live & Learn acknowledges and understands the diverse educational needs in the Pacific region and has ensured that each resource has been designed with the view that it might be used separately and not as part of the whole set. The resources are designed to support facilitated community and school activities, and some require previous knowledge and experience. Where this is the case, this is clearly outlined in the introductory pages of each resource.

Feedback on this resource

Please help us to improve this flipchart. Let us know what you think by answering the questions below and sending them to us. You can provide feedback via email: resources@livelearn.org

1. Briefly explain how you used this resource. (e.g. are you a business owner, health professional or NGO worker?)
2. Is this flipchart easy to follow? (if not please tell us what was not clear)
3. Was there information that you think was missing?
4. How could this flipchart be improved?
5. If you have any other comments that you would like to make or suggestions please let us know.

With thanks from Live & Learn Environmental Education

This flipchart was produced by Live & Learn Environmental Education and funded through the AusAID Civil Society Water, Sanitation and Hygiene (WASH) Fund.

Australian Government
AusAID

LIVE&LEARN
Environmental Education

www.livelearn.org

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Contacts for H_2S test bottles

Fiji
Producers: IAS (USP) T: (+679) 323 2965
Distributors: WHO (SP)

Papua New Guinea
PNG Waterboard T: (+675) 323 5700
PNG Department of Health
T: (+675) 301 3704

Solomon Islands
Solomon Islands Water Authority
T: (+677) 23985

Vanuatu
Producers and distributors:
Ministry of Health T: (+678) 22512

Recommended disposal:

We recommend that used tubes are returned to a safe and approved disposal centre. These are listed below:

Fiji: IAS (USP) T: (+679) 323 2965

Vanuatu: Ministry of Health,
Ms Nelly Muru Ham, T: (+678) 22512

Papua New Guinea: Return to Live & Learn Environmental Education

Solomon Islands: Return to Live & Learn Environmental Education.

If you are unable to return the tubes to a safe disposal centre, the following steps can reduce contamination to the environment.

After the test results have been recorded:

1. Open the used tubes and immerse the tubes and contents in a bucket that contains a mixture of water and bleach or disinfectant. Use the proportion of 1 cup of bleach/disinfectant per 1 litre of water. If you do not have bleach or disinfectant, you can burn the whole bottle but do this far away from a water source.
2. The mixture in the bucket needs to be left for 24 hours to kill bacteria.
3. The contents of the bucket should be emptied far away from a water source.
4. The bottle can be disposed of with other hard rubbish.