“Now we know how to keep our water clean and keep our children from getting sick we have really seen a big difference in our families – we buy less medicines, the children don’t miss so many lessons and I am not always so tired I can’t work.”

Lead farmer in Zimbabwe

Photo: Kenya, 2018 © Alicia Melville-Smith/British Red Cross

Safe Water, Sanitation and Hygiene

Simple messages and practices for volunteers to communicate to people better understand how to keep the water they use in the home safe and their families free from germs, parasites and disease which can make them unwell.

What does the activity look like?

It will involve volunteers talking to people in the community and explaining:

- Key messages about safe water, good hygiene and healthy practices.
- How to do simple activities to keep water safe and families free from illnesses.

Wash your hands with water and soap or ash regularly.

Photo: Kenya, 2018 © Alicia Melville-Smith/British Red Cross

Photo: Wagha Province © Sarah Oughton/IFRC

What are the main benefits?

Helps people to make the water they use safe and the food they prepare clean and free from contamination and disease.

Helps people have self-respect, to be stronger and feel good about themselves.

Keeping food, water and people clean can help to reduce the amount of illness in the family. When people are sick and unwell, they find it difficult to work or to get the nutrition they need from the food they eat. This can affect their health and their ability to produce their own food or income.

Clean and healthy conditions are particularly important for the elderly, pregnant and breastfeeding mothers, young children and for the chronically ill or people living with HIV, who are more likely to get illnesses.

"Even short-term changes in behaviour can be important where the health risks are high. If people feel themselves to be at risk then they are also more likely to change their behaviour quickly. Therefore, if that willingness to change is enabled it can happen very quickly."

IFRC 2008

Key messages

Keep repeating these simple clear messages to everybody in the family and community:

01. **Flies and other insects can spread disease. Wash food properly before cooking and eating it and keep food covered.**

02. **Discourage people from defecating outside and locate latrines safely away from homes, water sources and food preparation areas. Clean the latrines on a regular basis.**

03. **Handwash with soap and water, especially after using the latrine, changing diapers/nappies, touching animals and food. Dispose of children's faeces safely.**

04. **It only takes one person in the family to fail to wash their hands with soap and water after touching something dirty, and they can spread a contamination or disease to everyone else in the family and community.**

Preparations

Timing tips

Informing people about safe water, sanitation and hygiene does not take a great deal of time, but working with them to make sure they understand and use good practices can take longer.

Volunteers will need to keep following-up and repeating the key messages to make sure that everyone in the family and community keeps using the good practices. It may take months or years to change people's behaviour so that they adopt good practices in the long term.

Try to start at times of the day or at a time of year that is less busy for the specific group of people you plan to work with.

What does the volunteer need to do before the activity can start?

Follow the 'Essential Guidance' in the 'Introduction' to this handbook, for advice on getting people involved and organising meetings.

- Ask people or hold a meeting in the community to see if people think this 'safe water, sanitation and hygiene' idea is a good one and to see who is interested in being involved.
- Do you need to get any agreement or permission from the local Red Cross and Red Crescent, government authorities, community leaders or other family and community members?
- See the general advice on messaging and how to spread ideas in the Introduction of this handbook.
- Ask people if they would prefer to work in separate groups. It is recommended that you direct your key messages to different types of people and those who usually carry out the specific activity that is referred to. For example, when women and girls or boys are in charge of collecting water, they need to be the ones targeted by the messages about collection and transport of water. You can adapt the key messages to the different people you will work with. Women and men might prefer to talk about some things separately. You might need to change the way you speak to children about the key messages.
- Everybody uses the latrine, so everyone needs to hear sanitation and hygiene messages!
- House to house visits offer an opportunity to spread key messages about safe water, sanitation and hygiene, and for volunteers to assess and tailor messages to the specific needs of the family, but you will need to be sensitive and respectful.
- Much of the information and images in this section have been adapted from the IFRC (2008) 'Household water treatment and safe storage in emergency' and volunteers are encouraged to read it for more detailed information at ***https://ifrcwatsanmissionassistant.wordpress.com/water/***

Photo: Mozambique, 2020 © Peter Caton/DEC

How to avoid risks

The activities in this section are low risk. The main risk is if people do not follow the instructions and key messages very closely, so the volunteer is encouraged to follow-up with households to confirm that families are putting new practices into action safely.

Photo: Ethiopia, 2012 © S. Truelove

People need to agree how to keep human and livestock drinking water safe.

Try to get people to discuss risks before you start the activity:

- What are the most likely things that could go wrong when trying to ensure safe water, good sanitation and hygiene?
- What ways can people think of avoiding these difficulties?
- How do all the people using a water source want to keep it clean?
- How can animals be kept away from human drinking water sources?
- What can the community do to make sure there is safe water, sanitation and hygiene when there are emergencies (drought, floods, cyclones, etc.)?

Photo: Zimbabwe, 2019 © Jordi Matas/British Red Cross

Everybody uses the latrine, so everyone needs to hear safe water, sanitation and hygiene messages!

Photo: © S. Truelove/APT

How to implement the activity?

Step 1	**Spread key message 1 – There are 7 basic rules for safe water, sanitation and hygiene**
Step 2	**Spread key message 2 – Store and handle water safely**
Step 3	**Spread key message 3 - Water treatment part 1: clear cloudy or muddy water**
Step 4	**Spread key message 3 - Water treatment part 2: disinfect water**
Step 5	**Repeat key messages and try 'pot racks' and 'tippy taps'**
Step 6	**Monitor to make sure advice is being followed safely**

Step 1: Spread key message 1 – There are 7 basic rules for safe water, sanitation and hygiene

Rule 1	**Water sources** should be used with care and maintained in good condition and with good hygiene. There should be no risk of contamination from nearby latrines, wastewater drainage, animals, or objects falling into the water source or well.
Rule 2	**Water collection and transportation** - Drinking water should be collected in clean vessels without coming into contact with hands and should be cleaned regularly and kept covered.
Rule 3	**Water storage** - Drinking water should be stored in a separate container from other domestic water wherever possible. Water should be stored in clean vessels which are covered and regularly cleaned.
Rule 4	**Water treatment** - If the water source is not clean, or the water is not stored or transported safely, the water will need to be treated at home so that it is safe to drink (use the easy methods described in the water treatment section below).
Rule 5	**Water use** - Drinking water should be taken from the storage vessel with a dipper or ladle so that hands, cups or other objects cannot contaminate the water.
Rule 6	**Latrine use** - Latrines should always be used instead of defecating outside. Latrines should be located away from water sources and be kept clean (and emptied or replaced regularly).
Rule 7	**Hand washing** - People should have soap or ash and water for washing hands.

Photo: Mauritania, 2013 © Katherine Mueller/IFRC

Careful: Drinking water should be collected in clean containers without the opening coming into contact with hands.

Step 2: Spread key message 2 – Store and handle water safely

All efforts to make water safe to drink are wasted if the water is not properly stored or handled. Encourage people to **always** wash their hands with soap (or ash) and water before handling drinking water or containers.

Photo: 2008 © IFRC

All efforts to make water clean are useless if the water is not properly stored or handled.

But there's a problem:

- Narrow necked containers prevent contamination but are difficult to clean.
- Wide necked containers are easily contaminated but easily cleaned.

What is safe water storage?

Safe water storage is the use of clean containers with covers and good hygiene behaviours that prevent contamination of the water during water collection, transport, and storage in the home.

Narrow necked containers help prevent contamination but are difficult to clean. Wide necked containers are easy to clean but will need to be covered to prevent contamination. **Encourage people to use whatever containers they have** but to keep containers clean and covered. It is best if people use different containers for collecting water and storing water.

For narrow necked containers, encourage people to clean them regularly with a soap solution, chemical disinfectant (if available), or small stones or pebbles to rub or scratch off anything stuck inside.

For wide necked containers, encourage people to keep them covered and find a way to take water out but without hands touching the water. This could be a long-handled ladle that allows them to collect the water without touching it, or an outlet tap at the bottom of the container. People should also be encouraged to regularly clean the container.

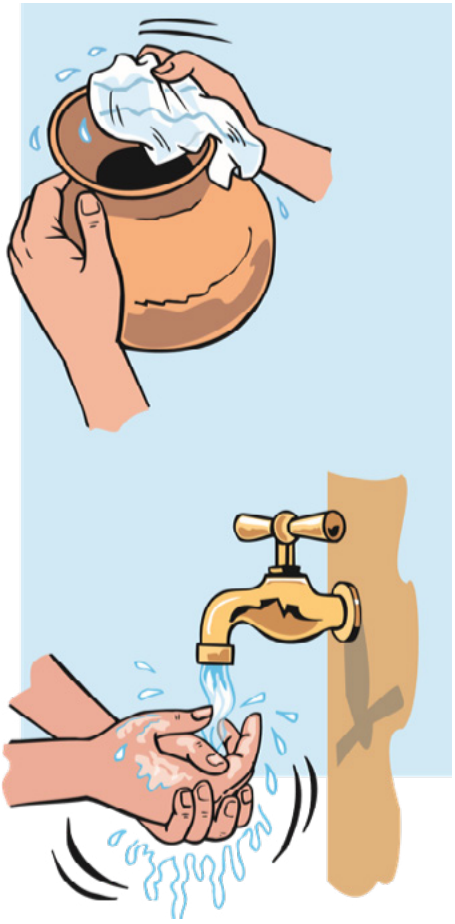

Photo: 2008 © IFRC

Keep containers clean and wash hands before handling water or containers

All illustrations in this and following spreads are adapted from IFRC: Household water treatment and safe storage in emergency (https://ifrcwatsanmissionassistant.wordpress.com/water/)

Step 3: Spread key message 3 - Water treatment part 1: clearing cloudy or muddy water

There are many water treatment methods, so you are advised to describe one water treatment method at a time on different days.

For more details and in other languages, see: ***https://ifrcwatsanmissionassistant.wordpress.com/water/***

This section will focus only on the methods that do not involve much input and can easily be achieved at home:

If water is cloudy or muddy follow these simple steps:

Step 1 – **Strain** the water through a clean fine cloth (see below).

Step 2 – **Sediment** – Give the water time to settle (see the '3 pot method' described on the next page) so that dirt falls to the bottom of the container, making the water more clear.

Note: Straining and sedimentation does not make the water safe to drink. It still needs disinfection to remove germs that cause disease. But making dirty water clear will make disinfection more effective.

Straining and sedimentation do not make the water safe to drink but can make disinfection more effective.

It is essential to treat water to make it safe, especially for vulnerable groups like the elderly.

Photo: Ethiopia, 2012 © S. Truelove

Photo: 2008 © IFRC

Use a clean cup or ladle to handle water and strain it through a clean cloth.

Straining water that is muddy or dirty through a piece of fine, clean cotton cloth, will help remove dirt, small pieces of soil and insect larvae contained in the water. A cotton cloth that you cannot see through works best. A cloth should not be so thick that it takes a very long time to filter the water. You can test to see if the cloth is suitable. If the dirt does not pass through the cloth, then it is working correctly. Washing the cloth between uses will make straining more effective. Straining alone is unlikely to make dirty or contaminated water completely safe to drink. But it makes household water treatment easier.

Sedimentation using the '3 pot method' – The three pot method (see the 'visual aid' in the Annex) reduces dirt and germs that cause disease by storing water in containers, allowing dirt to settle, and then moving the cleaner water to different containers over time.

You can discuss the positive and negative points of the 3 pot method with people:

- The 3 pot method greatly reduces dirt and disease causing germs.
- This method is low cost, easy to use, and is something people can do themselves with local resources.
- This method reduces, but does not totally remove, germs that cause disease. **All water should also then be disinfected**.
- Boiling, chemical, or solar disinfection is still needed to completely remove all risk of disease (covered in the next step).

Step 4: Spread key message 3 - Water treatment part 2: disinfect water

Disinfection – making sure water is free from germs that cause disease. This may be done by chemicals, heat, or even sunlight.

Here we describe 3 types of disinfection:

1. **Boiling** - For boiling to work, **water must be brought to a rolling, bubbling boil for at least one minute in low elevations and for at least 3 minutes at high elevations (in the hills)**.

   Boiling has good and bad points. Discuss these with people:

   - Boiling will kill all germs that cause disease and is something people can do themselves.
   - It takes one kilogram of firewood to boil one litre of water for one minute.
   - Boiling should not happen in areas where wood is scarce or gathering it is unsafe and other heating options are available.
   - Boiling will not make water less cloudy.
   - Boiled water can be re-contaminated, if not handled or stored safely. Boiled water should be stored safely and used within a few days.

Photo: 2008 © IFRC

Tip - Boiled water may not taste very good. This can be fixed by shaking the water and adding a very small pinch of salt per litre of water.

2. **Solar disinfection** - Putting water that is in plastic or glass bottles in the sunlight will destroy most germs that cause disease. In tropical regions this will take around five hours, before and after midday. The amount of time the bottle is exposed to the sun will need to be doubled (two days instead of one) when the water is cloudy. The exposure time should also be increased if the weather is not sunny (rainy season).

   Solar disinfection has good and bad points. Discuss these with people:

   - Solar disinfection will kill most germs that cause disease if exposed to the sun long enough.
   - Solar disinfection is something people can do themselves with widely available materials (clear bottles or clear plastic bags).
   - Solar treated water can be re-contaminated if not handled or stored safely. It should be stored safely and used within a few days.
   - Solar disinfection takes more time than other methods and requires sunny weather.

   Tips:

   ✓ For greater effectiveness place the bottle on a corrugated-iron roof.

   ✓ To speed up the process, fill the bottle three-quarters full and vigorously shake it. Then fill the bottle and expose it to sunlight. Further shaking during exposure will also help.

   ✓ People are unlikely to want to drink the warm, treated water. Encourage them to let it cool.

3. **Chemical disinfection** – there are many chemicals available that can disinfect water (for example chlorine tablets). Whichever chemical people use, the important thing is to **follow the instructions carefully**. If there are no instructions, then try and find a product that does have instructions or ask somebody who is likely to know (such as a health professional, trained Red Cross or Red Crescent or NGO staff member).

Step 5: Repeat key messages and try 'pot racks' and 'tippy taps'

You are advised to repeat all the key messages and all the different treatment types in different ways. You could ask participants to explain key messages to one another.

Encourage people to try building '**pot racks**' and '**tippy taps**'

Photo: Kenya, 2015 © S.Truelove/innocent foundation

Try a 'Pot rack' to reduce contamination of plates and cooking tools by storing them above the ground

Photo: Kenya, 2015 © S.Truelove/innocent foundation

Try a 'tippy tap' for handwashing close to latrines and places where food is prepared and eaten

There are instructions for how to build a tippy tap in the Annex. You can also find the instructions online in English and other languages at: ***http://www.tippytap.org/build-a-tippy-tap-manual***

Step 6: Monitor to make sure advice is being followed safely

One lesson on how to use these methods **is not enough**.

Keep repeating these messages in as many different ways (meetings, leaflets, house visits, radio, school, clinics etc.) as possible.

Follow-up training and monitoring should be carried out after the initial training.

Volunteers can keep track of changes changes in the community about:

- People's satisfaction with the advice and methods.
- Are people using the advice and methods correctly?
- Are people's other hygiene practices improving?

Photo: Mauritania, 2013 © Moustapha Diallo

Regularly observe and talk to people to check if they are able to follow the advice on sanitation and hygiene correctly.

Things to watch out for

⚠ **If you are storing water, always try to keep it covered or it will encourage mosquitos which can spread disease!**

⚠ **Costs of fencing to keep livestock away from drinking points can discourage people, so try to find alternatives (use discarded materials or thorny branches to start with and consider planting thorny bushes).**

Top tips

- ✓ **Encourage people to start small and slowly increase the new ideas and methods that they use, or they may get overwhelmed at first.**
- ✓ **Try to keep costs low by encouraging people to make use of the things they already have and share resources. Activities with high set-up costs can put the poorest people off and may increase their risks.**
- ✓ **Keep repeating messages in different ways and different places.**
- ✓ **Encourage people to share their ideas with others and neighbouring communities.**
- ✓ **Get advice from extension officers, health workers and other knowledgeable people.**
- ✓ **General merchants may be willing to give you some disinfection samples to demonstrate to people. Make sure you follow the instructions carefully!**
- ✓ **Once the volunteers and community groups are confident and used to running 'safe water, sanitation and hygiene' awareness sessions, try a follow-up activity and run an awareness session in a community location such as on market days, with neighbouring communities or at schools, health centres or other institutions, to tell other people about the new methods and the ideas.**

Links to other sections in this handbook

This activity links well to the other activities in this handbook:

Section 7

Water Harvesting and Conservation

Section 9

Nutrition Awareness

Section 11

Early Warning and Early Action

Resources and skills needed

What resources are needed to run the activity?

- For volunteers - visual aids for awareness sessions are helpful but not essential.
- For people involved - water containers, clean cloth, water, soap or ash, time and effort.

Optional:

- Occasional meeting space.
- Record keeping book (list members, record any ideas or payments for shared resources or materials, etc).
- Organise advice sessions or trainings from other experienced people or extension workers.

Who can provide advice?

Some people in the community will already have good knowledge and awareness on safe water, sanitation and hygiene and can be asked to provide advice (for example teachers, health workers such as nurses, traditional birth attendants, doctors etc). If these people are not available in the community, then government extension officers, knowledgeable people based in neighbouring communities, other NGOs (non-government organisations) or international agencies may be able to provide advice and support.

Photo: Mozambique, 2020 © Peter Caton/DEC

Approximate costs

Safe water, sanitation and hygiene awareness can cost as little or as much as you want to invest. If you use people's existing containers, cloths and other materials and share and make your own tools, then you can keep costs low.

Volunteers may choose to invest in producing visual aids, pictures or leaflets to distribute, but you may decide to use other effective methods like demonstrations, theatre sessions and role plays, or ask the local radio station to spread the messages.

What skills or knowledge do volunteers need?

There is no special knowledge required for safe water, sanitation and hygiene awareness, but:

- You will need patience and persistence to explain ideas and keep trying to help and support people
- You will need confidence to ask other knowledgeable people like local health workers to help advise. Can you persuade them to join you in running or supporting the activity?

What skills do participants need?

No specialist knowledge needed. People will get advice from the volunteers and learn together and teach each other.

What needs to be monitored or followed-up?

Monitoring is optional, but sensitive follow-up to confirm that people are using the ideas and methods correctly is important.