



# WATER OF LIFE

## Introductory notes for school speakers

This workshop contains up-to-date facts (as of 2013) and the most recent stories from Christian Aid's partners around the world, as well as ideas for interactive activities for older and younger pupils. You can adapt the material and the activities to suit the needs of the school you are visiting, the age and ability of the pupils, the timings and format of the session, and your own preferences. The age group appropriate for each activity is indicated, and suggestions are given for how activities can be adapted and extended.

### The issue: water

Water is essential for life: human beings can survive three weeks without food, but only three days without water. And yet this vital resource, which is so often taken for granted by those who have it, is out of reach for many across the world. Inadequate access to clean water limits people's ability to live a full life: it is estimated that nearly half of all people in developing countries at any given time suffer from a health problem related to dirty water and poor sanitation. And it's not just people's health that suffers – millions of people, most of them women, spend several hours every day collecting water, which takes up vital time and energy that could be used for other things.

#### Key facts

- Around 1 billion people in developing countries have inadequate access to water.
- Over 2.5 billion people lack good sanitation facilities (toilets, drains etc).
- 1.8 million children die each year from diarrhoea.
- Millions of women and girls spend several hours every day collecting water.

#### Key date

World Water Day is celebrated on 22 March each year.

**Countries featured in this workshop:** Ethiopia, Kenya, Bangladesh, Bolivia, Senegal.

#### PowerPoint

There is an optional *Water of Life* PowerPoint presentation to accompany this workshop, but it is not essential to use it – most of the stories and activities can be adapted to leave out the PowerPoint elements. The PowerPoint presentation is available to download from the volunteer teachers' Dropbox.

#### Film

This workshop makes use of film footage, which can be downloaded in advance. All the suggested films are available to download from the volunteer teachers' Dropbox, or you can ask your local Christian Aid office for help with this. If there are no facilities available for playing films (check with the teacher first), or if you prefer not to use them, you can adapt the activities to leave them out, or in some cases show PowerPoint slides instead.

#### Session planner

The table overleaf provides an overview of suggested activities and approximate timings. It also lists materials, worksheets and films required for each activity. You can tailor your own session plan from this list, and add or adapt activities to suit your needs.



Age group	Activity	Approx. timing (mins)	Materials	Worksheet (available to photocopy at end of this pack)	PowerPoint slides	Film
All ages	Warm up	10	Glass of dirty water (water with coffee), picture/drawing of a mosquito, empty plate, picture of a gun. (Optional: can use slides 2-5 instead.)	x	✓ (optional – can be used instead of the materials listed) Slides 2–5	x
Primary	Water, water everywhere	10	x	x	✓ (required) Slide 6	x
All ages	Carrying water	15	10-litre bucket filled with water or 5 x 2-litre bottles	For older students: 'Water watcher' worksheet (one per student)	✓ (optional) Slide 7	x
Primary	Flying toilets	15	Plastic bag containing wet paper/playdough	x	x	<i>Sanitation in Matopeni</i>
Secondary	Climate change impacts	20 - 25	x	'Water needs' worksheet (one per student)	✓ (optional) Slides 8–15	– <i>SuperDucks: climate change and water in Bangladesh</i> – <i>Glaciers: climate change and water in Bolivia</i> – <i>Oumar's Story: climate change and water in Senegal</i>
Primary	Concluding activity	10	x	'Water drop reflections' worksheet (one per pupil)	x	x
Secondary	Concluding activity	5-10	x	Water watcher worksheet (one per student)		

## Aims of the workshop

### For younger pupils:

To understand why water is so important, and the impact that lack of water and sanitation can have on people living in poverty.

### For older students:

To understand how and why Christian Aid partners improve access to water and sanitation around the world, and to consider some impacts of climate change on water resources.



## Learning outcomes

By the end of this session, **younger pupils** should be able to:

- understand that water is essential for life
- recognise that water is a precious resource
- reflect on their own use of water and ways to reduce waste
- understand some of the challenges facing communities with inadequate water supplies.

By the end of this session, **older students** should be able to:

- understand the health implications for people with inadequate access to water
- reflect on their own use of water and compare this to water use around the world
- understand how climate change is changing water resources across the world through glacial melt (Bolivia), drought (Senegal) and flooding (Bangladesh).

## Warm-up activity for all ages

Ask four pupils to come forward and hold one of the following items:

A glass of dirty water (water with coffee in it), a picture/drawing of a mosquito, an empty plate, a picture of a gun. (There are also pictures of these items on slides 2-5, if you prefer to use the PowerPoint presentation to illustrate this activity.)

### Question:

- Which is the most dangerous item?

### Explain:

*The gun (if it was real) would obviously be the most dangerous item for any of us to handle, but actually it's not the biggest killer here. It could be argued that the most dangerous item is the glass of dirty water, as diseases carried by dirty water kill more people worldwide than any of the other items. The mosquito is also an extremely dangerous threat in some countries (though fortunately not in ours): malaria, a mosquito-borne disease, kills hundreds of thousands of people*

*every year. The empty plate is another big danger, as hunger and malnutrition are a major threat to health in lots of countries – not having enough food means that your body is weaker and much less able to recover from illnesses such as diarrhoea and malaria. It's perhaps surprising that the gun, which as we know is very dangerous, accounts for a relatively small proportion of deaths compared to the other global killers shown: unclean water, hunger, and diseases such as malaria, threaten the lives of many millions of people every year.\**

### Question:

- Why is dirty water so dangerous?

### Explain:

*Drinking unclean water is a common cause of diarrhoea, which kills 1.5 million children every year.\*\* Here, diarrhoea is not something that we think of as a dangerous disease. In fact, all of us have probably had it at some point, and not one of us has died from it. We all know the symptoms of diarrhoea, and it's not very nice. But a deadly killer? It seems impossible, right? Wrong.*

*Diarrhoea is very dangerous if you live somewhere where there is not much clean water to drink. And if you are hungry and your body is weak, it can be deadly. Because human bodies are around 60 per cent water, we need to keep well-hydrated (topped up with water). Diarrhoea can make you dangerously dehydrated and can also upset the important balance of salts and minerals in your blood – which can be deadly. But don't worry, no one here is going to die from diarrhoea! Our bodies are strong and healthy from the food we eat. And if we're feeling a bit poorly, we can visit the doctor or chemist for some medicine. And – perhaps most important of all – if we are thirsty, we can turn on the tap and have a drink of clean water.*

*All those things will keep us safe and, fortunately for us, they are basic things that we can take for granted most of the time.*

\*<http://www.who.int/mediacentre/factsheets/fs310/en/index.html>

\*\*WHO/UNICEF



## Activity: Water, water everywhere

### (For younger pupils)

Ask pupils to close their eyes and think about what they did before they came to school this morning.

#### Questions:

- Did they brush their teeth?
- Did they wash their face?
- Did they use the loo? And wash their hands afterwards?
- What did they have for breakfast, and was it accompanied by a glass of water?

*So many things that we do rely on water: drinking, brushing our teeth, washing our hands, flushing the loo. But many less obvious things also depend on water.*

Show pupils the photo of a kitchen, on slide 6.

- How many things can they spot that require/use water?

#### Explain:

*The most obvious answers are: tap, dishwasher, kettle.*

*But there are actually lots of other things in this picture that have depended on water: the bananas in the bowl; the plant on the windowsill; the recently washed dishcloth – in fact, even the*

*cotton the dishcloth is made from needed water to grow! Not to mention all the manufactured goods in the picture, many of which would have required water in the processing of the materials. Water is also used in the processing of camera film – and of course the person who took the photo would have needed to drink water. Without water, there would be no photo, no kitchen, no fruit or plants, no photographer. Without water, there would be no life at all.*

- How long can humans survive without food?

*The answer is three weeks.*

- How long can humans survive without water?

*The answer is just three days!*

*But it's so easy to take this life-giving substance for granted. How often do you give thanks when you turn on the tap and clean, cool water comes rushing out? Not many of us do, but we should. For many people around the world, running water piped into a home is an unaffordable luxury, and getting hold of water is a daily struggle that eats away at time, energy and health.*

*If your water doesn't come out of the tap, then it needs to be collected. If you're lucky, that will be a well or tap somewhere nearby. But for many, that source is a long way off – and the water when they get there might not be clean at all: it might be a river, stream or muddy pool.*

## Activity: Carrying water

### (For all ages)

Ask a pupil to come up to the front and lift the 10-litre bucket/bottles of water. (Note – you should check with the teacher, beforehand, that they are happy for you to do this.) If you are sure that pupils can manage it without risk of injury, ask them to carry this across the room and describe to the others what it is like.

#### Questions:

- Does it feel heavy?
- How far do you think you could carry a heavy bucket of water?
- Do you think you could carry it for 4km /2.5 miles?

Show slide 7 of the *Water of life* PowerPoint presentation.

**Explain:**

Etebane Jemal is twelve years old. She lives in Ethiopia. Twice a day, she makes the 4km/2.5 mile round trip to the nearest source of clean water to collect 10 litres and take it back to her home. The long journey is dangerous for a young girl on her own – she risks being kidnapped or attacked by wild animals – but for Etebane that risk is just a fact of life; there are even greater dangers from drinking unclean water.

*'There is water in the river closer to my village, but it is polluted, so I travel here because I know that the water is safe and [of] good quality. I can tell it is good, it looks different and it tastes different,'* said Etebane.

*But there is a big price to be paid for clean water: less than half of the girls in Ethiopia go to school, and one of the main reasons is that it is usually girls who are sent to fetch water. If you have to spend several hours a day collecting water, there is little time left for other things.*

*Eyerusalem Habtamu, who is now 22, knows all about the sacrifices that many women in Ethiopia have to make for water. She wanted to study to be a health visitor and help her local community. But because she missed so much school, fetching water for her family every day, her grades were not good enough.*

*Hopefully Etebane will be luckier, and her daily need for water will not destroy her dreams. In Etebane's community, people have been busy digging a pipeline that will soon bring water from the spring directly to her village.*

*Etebane looks forward to the time when she will not have to travel the long distance to fetch clean*

*water. 'I will be so happy! I will no longer be tired from all the walking,' she says. 'It takes me about two hours to collect water each time, and I go twice a day, so everyday I walk for four hours. When I have the water point in the village, all that time will be mine! It is important that I spend some of the time looking after our crops, but I'm a good dancer and I want to spend more time dancing with my friends!'*

*Etebane is currently out of school because of bad health. 'I hope that this pure water will help me to get rid of my headaches,' she says. 'Then I want to go back to school and learn. I can't think beyond that – that is the first thing I must do.'*

**Questions:**

- Etebane, like most people in Ethiopia, uses about 20 litres of water each day. How much water do you think you use each day?
- Do you think you would be able to carry the water that you use for long distances?

**Explain:**

*The average person in the UK uses about 150 litres every single day! And that's just if we count what is used for drinking and washing; if we added up all the different ways in which water is used to make the things that we use – such as clothing and food and heating and transport – the true amount of water we use up is about 4,645 litres a day! That is nearly 60 bath's-worth every day!\**

**Taking it further for older students:**

Hand out the 'Water watcher' worksheet, which contains some homework for students to monitor their own water use and reflect on the many ways in which they use water every day.

\*guardian.co.uk/environment/2008/aug/20/water.food



## Activity: Flying toilets

### (For younger pupils)

The following activity explores sanitation issues and draws on a certain amount of 'toilet humour'. We have found that this is a really good way to engage pupils with the important issue of sanitation, but it is advised that you discuss this with the teacher prior to a visit and adapt according to their advice and your own preferences.

Before your talk starts, you could arrange with a teacher for a surprise announcement to be made, or you could make it yourself in the following way:

Open up a piece of paper that contains 'an important announcement from the local council': *Unfortunately, one of the main water pipes in [local town/area] has burst, and the school water supply has been turned off. Rather than shut the school, the council has provided some plastic bags, so anyone who needs to use the loo can just go in a plastic bag.*

You could have a pre-prepared plastic bag, full of wet paper/play-dough, which could be used to comic effect before explaining the serious point: *In Kenya, these are called 'flying toilets', and they are a major health hazard for people living in some areas.*

Ask the pupils how they would feel about going to the loo in a plastic bag – especially if they won't get to wash their hands afterwards. Ask them if they would have any worries about it (suggestions might be: it would be embarrassing, it would be unclean, it would be smelly, the germs might make people ill).

### Explain:

*Of course, the water supply has not really been turned off, and if it was the council would probably shut the school for the day – that is how important it is for our health to have clean water to drink, to flush the loo and to wash our hands.*

*But for many people around the world, unsafe water and bad sanitation are a reality of daily life.*

Watch the film *Sanitation in Matopeni*, which shows the story of a young boy who lives in Matopeni, a small slum settlement of about 300 families, in Kenya.

### Explain:

*Flying toilets are a serious health hazard in Matopeni as there is no rubbish collection in the settlement, so human waste gets stuck in the mud and in the drains near where people are living. The drainage system is often blocked and it floods when it rains, carrying waste and germs into people's homes. Inspired to make a difference, Matopeni residents founded the Arise and Shine community group to help the inhabitants help themselves. Christian Aid partner Maji na Ufanisi secured funding to work with Arise and Shine, to provide water and sanitation facilities in Matopeni, including taps for clean water and drains. It also persuaded the local council to provide a shower block and toilets.*

### Questions:

- What things did you notice about where Jeremiah lives?
- In what ways are his needs the same as our own?
- How will the new taps, shower block and toilets make a difference to his life?



## Activity: Climate change impacts

### (For older students)

Show the following short films, which detail different ways in which climate change is affecting water across the world:

- *SuperDucks: climate change and water in Bangladesh*
- *Glaciers: climate change and water in Bolivia*
- *Oumar's Story: climate change and water in Senegal*

Hand out the 'Water needs' worksheet and ask students to note down anything of interest while they are watching the films.

### Questions:

- Can students name three different ways in which climate change is having an impact on human beings' relationship with water – in Bangladesh, Bolivia and Senegal?
- What is being done to counter the effects of climate change on people's water supplies?

### Explain:

*Christian Aid knows that access to clean water is an essential need, and our partner organisations work hard to improve access to water for the world's poorest communities. In many places, as climate change has started to disrupt weather patterns, that work now includes helping people to adapt to changing water issues.*

The stories below give more information about the impact of climate change in the countries shown in the films. (There are slides to illustrate each point in the *Water of Life* PowerPoint presentation.)

(Slides 8-10) *Bangladesh is a country on the frontline of climate change. Its geography and location make it vulnerable to flooding, storms and sea-level rises. Christian Aid partners are working hard to support communities affected by flooding, soil erosion and salination (when freshwater supplies become contaminated with salty seawater). Shakti and Monika Kirtoniya are farmers who live in the Gopalganj district. Waterlogging – caused by a variety of factors including silt in rivers, rising sea levels, increased rainfall and poor drainage – is becoming an increasing problem for*

*farmers in Bangladesh. The water is also becoming more salinated (salty) – something else that can be partially attributed to climate change. All of these factors mean that traditional crops cannot thrive. Christian Aid partners have helped Shakti to build a floating garden, which can cope with increased rainfall and flooding. And he and Monika have also been given some saline-(saltwater-) resistant seeds that can cope with salty water. Now the couple are making enough money to send their children to school.*

(Slides 11-13) *In Bolivia, many mountain communities are feeling the impact of melting glaciers which have traditionally been their main water supply. Christian Aid partner Agua Sustentable is helping communities to cope with this change. Nine-year-old Gati, who lives high up in the mountains, near the capital La Paz, says: 'We all worry about water, us and our parents.' The majestic glacier Illimani towers over his house and over his village school, but as the glacier recedes, the community is increasingly noticing the lack of water: 'It's not good here, there isn't much water. We are a bit sad here. We need water for our plants and for our animals.' Gati's community have an agreement with two other mountain communities that each of them has use of the nearby glacial meltwater stream for just two days each week. Agua Sustentable have helped Gati's community to build a reservoir which collects rainwater and their allotted water from the stream, and allows them to store it. This way they can sustain their crops throughout the week.*

(Slides 14-15) *In Senegal, Christian Aid partners have helped some people in the north of the country to adapt to drier conditions, and increased periods of drought. Ablaye Sow (70), used to be a pastoralist – someone who tends cattle on natural pastures – but the pastures that sustained his cattle were over-grazed and disappearing, so he had to seek a new livelihood. Christian Aid partner USE helped him adapt his lifestyle to the changing environment by providing his village with seedlings to plant fruit trees and help reforest the semi-arid area. Ablaye has learnt how to cultivate the trees and has become a fruit farmer.*



### Concluding activity for younger pupils

Hand out the 'Water drop reflections' worksheet and ask pupils to write three things they've learnt about water on them.

### Concluding activity for older pupils

You could ask pupils to take the 'Water watcher' worksheet home with them and use it to monitor the water they use over the course of a week and to identify ways in which they might waste less water. Ask them also to think of ways that they could reduce water-waste in school.

#### Other resources you could use to explore issues relating to water with younger students:

##### Global Explorers

This interactive whiteboard resource is a great tool for volunteer teachers. Most schools will have an interactive whiteboard, so check with the teacher prior to a visit. The countries that have stories relating to water are: Malawi (climate change), Honduras (deforestation and the water

cycle), India (flooding), Kenya (this includes the sanitation story and film of Jeremiah from Matopeni). Where this facility is not available, you can access the resource through the internet.

##### The Splash booklet

This is now available on the Learn website as a downloadable pdf.

### Assemblies

The following assemblies explores issues relating to water and sanitation:

- Crazy crabs: primary climate assembly
- Dying for the loo: primary sanitation assembly

**Please note: all these resources can be downloaded from [christianaid.org.uk/learn](http://christianaid.org.uk/learn)**

#### Other resources you could use to explore issues relating to water with older pupils:

### Assemblies

The following assembly explores water and sanitation issues:

- In the mud: secondary sanitation assembly

**Please note: all these resources can be downloaded from [christianaid.org.uk/learn](http://christianaid.org.uk/learn)**





## Water watcher WORKSHEET

Use this checklist to estimate how much water you use in an average week.

### Bathroom

#### 1. How many baths do you take in a week?

Multiply this number by 80, as each bath uses an average of 80 litres:  x 80 litres =  litres. This is the amount of water you use washing in the bath every week.

#### 2. How many showers do you take in a week, and how long do they last?

showers x  minutes = . This is the number of minutes you spend in the shower each week.

If your shower is a normal shower, multiply this number by 7, as normal showers use 7 litres of water per minute:  x 7 litres =  litres. This is the amount of water you use washing in the shower every week.

**OR**

If your shower is a power shower, multiply this number by 12, as power showers use 12 litres of water per minute:  x 12 litres =  litres. This is the amount of water you use washing in the shower every week.

#### 3. When you brush your teeth, do you leave the tap running? Yes/No

If yes, for how long?  minutes.

Multiply this number by 6, as a running tap uses 6 litres of water per minute:  x 6 litres =  litres.

Now multiply this by the number of times you clean your teeth in a week:  x  litres =  litres. This is the amount of water you waste every week by running a tap you don't need.

#### Note:

- these estimates do not include the water used for drinking or cooking, or the water that is used in things like food production, manufacturing, transport and heating
- the numbers here will be an estimate – the exact amounts would vary slightly according to the appliances in your home
- water calculator figures are based on figures used by the BBC online water calculator: [news.bbc.co.uk/1/hi/sci/tech/5084234.stm](http://news.bbc.co.uk/1/hi/sci/tech/5084234.stm)

### Kitchen

#### 4. Do you have a dishwasher in your home? If so, count how many times a week this is put on:

Each time the dishwasher is on, approximately 15 litres of water is used, so multiply the number above by 15 to find out how much water your family uses to wash-up dishes each week:  x 15 litres per wash =  litres.

Then, divide this number by the number of people who live in your house to work out how much water you use washing dishes:  ÷  [number of people in your house] =  litres. This is how much water you use on clean dishes every week.

**OR**

If you don't have a dishwasher, how many times is the washing-up done in a week:

Each time the washing up is done, approximately 10 litres of water is used, so multiply the number above by 10 to find out how much water your family use to wash-up dishes each week:  x 10 litre per wash =  litres.

Then, divide this number by the number of people who live in your house, to work out how much water you use washing dishes:  ÷  [number of people in your house] =  litres. This is how much water you use on clean dishes each week.

#### 5. How many times is the washing machine used in a week?

Every washing machine cycle uses approximately 50 litres of water, so multiply the number above by 50 to find out how much water your family uses to wash clothes each week:  x 50 litres per wash =  litres.

Then, divide this number by the number of people who live in your house to work out how much water you use washing clothes:  ÷  [number of people in your house] =  litres. This is the amount of water you use washing clothes every week.

Now, add up all the numbers that you have written in the shaded boxes (choosing between the shower types and how you clean your dishes), to work out an estimate of the amount of water you use each week for washing and cleaning:

Total:  litres.

The average person in the UK uses about 150 litres every day = 1,050 litres per week.

The average person in Ethiopia uses about 20 litres every day = 140 litres per week.



# Water needs WORKSHEET

Watch the films about people's relationship with water in the countries below.  
As you watch, note down anything of interest.

## Bangladesh



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## Bolivia



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## Senegal



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'Waterdrop' reflections  
**WORKSHEET**

Three things I have learnt about water: