



WATER

OTESHA PROJECT UK HANDBOOK

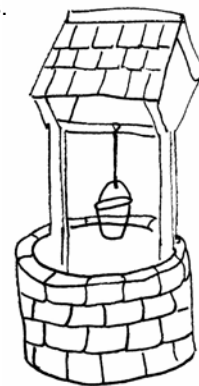
BIG THANKS TO PEOPLE WHO HELPED

This last wet and watery chapter has been one of the most satisfying to write, probably because so many different people were eager to dive in, splash around and help contribute. Big thanks to Eluned and Holly for coming clean about their water habits, Karo for all her research on bottled water and her beautiful maps, Sarah for lending us a photo or two and Pete for coming in and helping get Joc's story edited down to two pages! As usual, Jo did the illustrations, Hanna helped with the writing and Liz did the edits and layout.

To you, dear reader, we are also grateful. Thanks for reading, enjoying and (hopefully) contributing. If you've got any tales of high-seas adventure, want to confess your secret water addiction or have amazing ideas for how to stay a bit drier (and keep the planet a bit wetter) please send them in.

Email us at info@otesha.org.uk and who knows, we might just make you famous. Until next time,

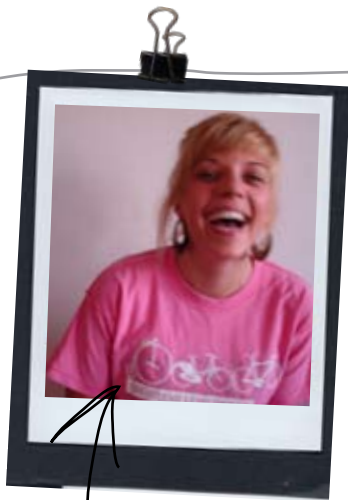
Liz, Hanna & Jo
The Otesha Project UK



People who contributed:

Eluned Charnley, Karo Korkeila, Holly Lambert, Sarah Weir, Jo Clarke, Pete Georgallou, Briony Greenhill, Liz McDowell, Hanna Thomas, Harry Akakpo, Jessica Lax, Jocelyn Land-Murphy (and others from Otesha)

THE BASICS



Holly won this shirt
because she grew a
wango

This morning I woke up a little late. I put the kettle on to make myself a cup of coffee then I jumped in a long, hot shower to wake myself up. I found time to do the washing up, put a load of washing in and quickly watered the plants in the house. As I walked to the bus stop, I got soaked – it was raining and I had no umbrella (I won't even tell you how frizzy my hair went!). I sat on the bus, a fed-up wet dripping mess..

Then I started thinking – my morning had been full of luxury so far. I had access to clean, hot, running water that I could drink, wash in and use to clean my clothes. I then walked outside and even more water was falling from the sky! And the more I thought about it, the more I realized that my water use goes far beyond the obvious too – the

clothes, food, energy, and transport I use all employ copious amounts of water in production.

Not everyone is in this luxurious position though. Approximately 1.1 billion people in the world don't have access to clean water – that's about 17% of the entire human race! And with around a third of the water that people in the UK (like me) use on a daily basis going to waste, there is a drastic need for us to change our habits. Fast. Don't feel overwhelmed by the task ahead – read on for some great ways to change your actions. Today. I won't be in the wasteful third anymore – short showers, less toilet flushing and more efficient use of water is the world that awaits me!

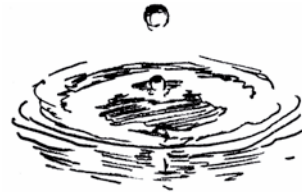
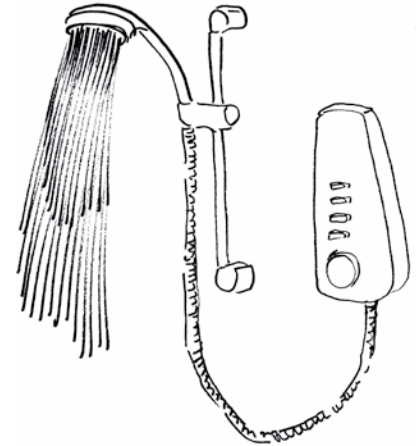


FYI-water use

- To survive, a human being needs 15 litres of water per day ¹
- The average person in the UK uses 150 litres of water a day for cooking, cleaning, washing and flushing.²

Where our water goes:

- A running tap uses 6 litres of water a minute.
- A shower uses between 9 and 45 litres a minute.
- A sprinkler uses up to 1000 litres per hour – more than a family of 4 uses in a whole day
- Toilet flushing accounts for 30% of our daily water use, with old toilets using up to 14 litres per flush.
- The average person in the UK washes away 1000 litres of water a week.



TRUE OR FALSE?

Things we're trying to wrap our heads around

Is there enough water to go around?

Yes, most definitely. Here in the UK, we see it all around us. Don't we get flooded in one region or another almost every year? Besides, the earth is two-thirds water after all – we aren't called 'the blue planet' for nothing. Sure, some countries have pretty serious water shortages, but aside from the occasional hosepipe ban we're doing just fine. Besides, it's not like we can exactly pack up the water we save and send it to drought-stricken countries in other parts of the world.

No way, hose. In the UK we have actually less water per person than most other European countries. As crazy as it sounds, the South East of England has less water per person available than the Sudan and Syria.³ Manchester

gets less rain than Sydney⁴ and two thirds of the annual rainfall in England and Wales evaporates or is 'consumed' by plants, crops and trees. Population growth means that our water resources are being stretched to the limit and there have been 11 drought orders issued in England and Wales since 1990, with the most recent years being the worst on record.⁵ A changing climate can only make these shortages worse, as extreme weather events (like floods and droughts) are expected to increase as average global temperatures rise.⁶

The verdict: Although the UK is better off than other parts of the world, we're not exactly in a position to sit back and feel smug. In fact, if we want to reduce future drought orders, we may want to start thinking about how to conserve the water we've got.

Woah. There are so many things in that short section that blow my mind. The situation is critical. How many more children will have to die before those that can, change their ways? How much more unjust do the statistics need to get before we stand up and take notice of them?



FYI- access to water

- Water doesn't fall evenly. Two thirds of the global population live in areas receiving only one quarter of the world's rainfall. ⁷
- Water is often polluted. Among the goodies finding their way into our water supply are pesticides, sewage run-off, oil, gas and septic tank leaks, land-fill seepage, road salt, hormones and antibiotics from prescription medicine, and chemicals used in manufacturing everything from cars to computers!
- Over 1 billion people have no access to clean drinking water, leaving one child to die every 15 seconds from drinking dirty water.
- Of these people, nearly two-thirds live in Asia.
- In sub-Saharan Africa, almost half the population (42%) doesn't have access to clean water. ⁸

Water injustice around the globe

UK – London is drier than Istanbul; The Thames Valley has less water available than in Afghanistan, Iran, Lebanon, Sudan and Egypt.⁹

U.S - The computer industry here uses over 4 billion litres of fresh water every day, enough for 1.7 billion people to drink.

Mexico - 3,000 'maquiladoras' (foreign-owned factories) create toxic wastelands, with waterways so polluted that 88% of residents have to use polluted water for cooking, bathing and irrigating crops, exposing themselves to dangerous diseases and bacteria.

South Africa - Every day, women collectively walk 16x the distance of a round trip to the moon to get water for their families. 600,000 wealthy farmers (mostly white) consume 60% of the country's water, while 15 million poor people (mostly black) have no direct access.

Zambia – High prices force low-income families to spend half their household income on clean water.

India – Since the 1960s, dams have forced 60-80 million people out of their now-flooded homes. 40% of those people are indigenous people – even though these 'low-caste' groups represent just 6% of the total population.

Indonesia – In a 1994 drought, Jakarta residents' wells went dry. Yet golf courses (for wealthy tourists) received 1 million litres each – enough to quench over 400,000 people's daily thirst.



Can consumer choices affect water issues?

Not a chance. It's easy to see how individual choices at home can cut our personal water use down from 150L per day, but our ability to make an impact doesn't really extend beyond this, does it? Sure, manufacturing industries probably use a lot of water, but there's no way that individuals can affect this process. In the end, it's the government's job to regulate things like industrial water use.

Absolutely. By paying attention to something called embedded or 'virtual' water, it's possible to have a huge influence just by thinking carefully about what we buy, eat and use. Here in the UK, virtual water is consumed when water-intensive goods are imported from abroad (like jumpers from China or tomatoes from Spain). This means that, in many countries, water that could be used by local people and farmers for survival is instead used to create export goods such as computers, clothing and petrol for wealthy consumers in developed countries. The food we buy also has major effects on water pollution. When animal



Embedded water

- When embedded water is taken into consideration, each person's daily water use in the UK jumps from 150L to about 4,645L. ¹¹
- It takes 400,000 litres of water to produce a single car, and another 500 litres per fill-up to produce the petrol! ¹²

waste (yep – cow poo) and pesticides run off into rivers and streams, water becomes contaminated. Even a small amount of pesticides is enough to make billions of litres of water unsafe. ¹⁰

The verdict. Although government probably does have a role to play in regulating water-intensive industries, it looks like our consumer choices, like buying something as un-watery as a non-organic apple, really do have an impact.



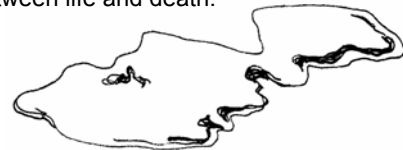
Is water a renewable resource?

True. Water is renewable, recyclable and sustainable. Since the water cycle means that water just circulates over and over (from our taps to lakes and rivers, then up to the clouds and back down to our taps again), we can use as much as we want. And since water treatment means that even wastewater gets cleaned enough to return to eventually rivers and lakes, we really won't run out anytime soon.

False. Global water consumption is doubling every 20 years – more than twice the rate of human population growth. Although it might seem like fresh water just circulates around and around, actually much of our drinking water is stored below ground in aquifers, which are being drained faster than they can replenish themselves. On top of this, freshwater being pumped out of lakes and rivers is causing streams to run dry.¹³ The effects of this are already showing - remember the 11 drought orders issued since 1990? The Weirwood Reservoir in Sussex recorded a drought that

lasted from December 2004 to December 2006, which reduced the reservoir to 50% of its original capacity.¹⁴ This is happening all over the world. In addition, because water must be heated, treated and circulated through our system, it's actually very energy intensive to use. It isn't just water that gets wasted as it goes down the drain. On top of the fossil fuels often burned to power this system, chemicals like chlorine, fluorine and caustic soda are used. So conserving water also means reducing energy and chemical use, and, in turn, addressing climate change.

The verdict. Although renewable if managed properly, our current rate of consumption means that it's more accurate to compare water with oil, except with no alternative if it runs out. Sure it'll regenerate eventually, but in the time it takes aquifers to recharge, millions or even billions of people won't have access to water. And access to water is the difference between life and death.



Is bottled water better?

No doubt about it. There are cases when bottled water is definitely better for your health. First off, if tap water originates from a surface-water source, it could be contaminated with commercial fertilizers since heavy rains mean that runoff from fields often ends up in the water system. And then there's worries about fluoride. Although 97% of Western European countries have chosen fluoride-free water¹⁵, it's still added to water in some countries, including parts of the UK.¹⁶ The tooth decay-preventing properties of fluoride are controversial and long-term health effects are unknown. Lastly, many countries don't have the same infrastructure and resources to ensure clean, safe tap water that we often take for granted. So when travelling abroad, bottled water may be the safest way forward.

Bottled water & money¹⁷

- Bottled water is 240 to 10,000 times more expensive than tap water
- 40% of all bottled water is just filtered tap water
- The industry is worth well over (US)\$213 billion
- (US)\$200 billion could build wells, purification systems and water infrastructure in places where people are dying every day because they don't have clean water.

Bottled water & oil¹⁸

- The bottled water industry guzzles 2.5% of global oil consumption
- The total energy required for every bottle's production, transport and disposal is equivalent, on average, to filling that bottle a quarter of the way with oil.

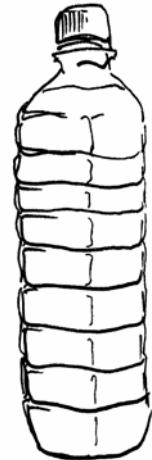
So what exactly are we paying two quid a bottle for anyway?



Not so fast! Although often marketed as pure and natural (think waterfalls, pristine springs and serenity), bottled water is often not as unadulterated as you might expect. The water is treated with a range of methods, from filtering and distillation to ultraviolet light and ozonation, and minerals are often added in afterwards.¹⁹ The EU has imposed rigorous guidelines for tap water and bottled water quality, which are roughly the same.²⁰ However, this isn't the case in the USA, where guidelines for tap water are stricter than for bottled water!²¹ Healthwise, tap water may even be better than bottled. And then there's the commercial angle - bottled water represents the commodification and privatisation of a precious resource that many argue is a basic human right. With every bottle

you buy, you're spending £1.00 or more on something that could be free, giving money to companies that don't need to be concerned with water access or affordability. And if that's not enough, then there's the waste. Bottled water leaves behind 1.5 million tonnes of plastic EVERY YEAR and emits thousands of tonnes of carbon dioxide getting the water from factories onto store shelves.

The verdict. In Europe, tap water is definitely safe to drink. Avoiding bottled water helps to save resources (from the packaging, transportation and water itself), reduce carbon emissions and save consumers money. Except when visiting countries where the tap water's not safe to drink, this one's a no-brainer.



HOW ELUNED GOT INTO WATER

Confessions of a (reforming) shower addict

To be honest, I never really gave much thought to water – until there was suddenly far less of it. As a dance student, I'd often have a quick 15-minute shower to wake myself up in the morning, and then indulge in a longer shower in the evening to de-sweat myself after a long day of classes. I never really kept track of how long I spent showering a day; all I knew was that there was nothing quite like a hot soapy shower to wake me up in the morning and unwind before bed. And besides, it seemed like there were so many other important issues to be concerned with, like waste, climate change and the impact of where my food came from. Occasionally as I turned off the shower I'd think about how much water I must be using, but showering just seemed so... necessary. I'll admit it – I was a full-blown shower addict.

However, when I went on an Otesha cycle tour this summer, I was suddenly confronted with cold turkey on the shower front. Many of the places we stayed during our 6-week tour were pretty basic, with perhaps one tap and a toilet to share between 18 of us. Instead of showering twice a day, it soon became normal to shower once or twice a week. I will never forget the feeling of the first shower I had on tour in a leisure centre. As I felt the joy of hot water on my skin for the first time in years (ok, so a few days but it felt – and smelled - like years!), I came to appreciate how badly I had been taking water for granted. In one place we visited, the shower consisted of a pulley and bucket contraption with a showerhead attached. Although it used only a couple of litres of solar-heated water per shower, not only did it feel like plenty, but it was also one of the best showers I've ever had!

As we moved on in the tour, the importance of water became more and more evident. We stayed in a number of places with compost toilets, where a handful of ash or sawdust was thrown into the toilet instead of the 10-litre flush that the average UK toilet uses. In one of the most remote and beautiful locations, we had to collect all our water from a spring. This water tasted purer and fresher than any of the chemical-filled tap water I've always been used to. In order not to disturb sediment at the base of the well, only a few jugs could be collected at a time, and with these we would provide for the cooking, drinking and washing needs of 18 hungry, thirsty and dirty people! To me, this experience really brought home the idea that water is not only fundamental, it is sacred.

Since being back home I have been far more conscious of the amount of water I use – and waste – every day. Although it has been difficult to wean myself off showering, I now have far fewer showers and have started putting a timer on for 4 minutes when I hop in. I've also started carrying my water in a reusable bottle, trying to use waste water on plants and in the garden of course and adhering to the all-important "if it's yellow, let it mellow" ethic*. Since researching for this chapter I have also begun to realise that water used in the home is just the start, and have begun to seriously consider how I can cut down on water waste embedded in the clothes I wear, transport I use, and food I eat. Now that my eyes are open to how precious water really is, there is no going back.



Eluded on tour with her trusty steed

*not flushing after you pee
the rest of the sawdust goes
'if it's brown, flush it down!...'

HOW JOCELYN GOT INTO WATER

A global perspective

My respect for water grew slowly, during a field term in Kenya in 2001. One day, our coordinator rounded up the students to tell us that we were draining all the water out of the village. My tent-mate Sabrina and I stopped flushing the toilet when we peed, and I started having very short showers. I patted myself on the back and told myself that surely I was doing my part to be a sustainable water consumer. But when I did my laundry I still used two buckets half-filled with water when one alone surely would be enough. I still left the tap on for more than one second when I brushed my teeth. I still showered every day. I was oblivious in my bubble.

A month later I arrived on my own in Uganda. All of a sudden there were no taps, no purified water. I was lost. What was I supposed to do? I asked the mucusu (hut 'hotel') owner where I could get water. She gave me a funny look, and told me that all the other mzungus (white people) she'd met brought their own bottled water, that the nearest pump was ten miles down the road, and that I might not have permission to use it. My face fell – I knew that I couldn't walk 20 miles in 40° heat for water that I might not even get. I'd already been eight hours without water. I felt like I was going to cry. The mucusu owner's daughter tugged on her arm. Her mother then nodded at me,



Joce^{lyn}, inspired by her travels to create a/could take part in the very first Otsha cycle tour

told me they'd been collecting rainwater and that I could have some if I truly needed it. I was relieved, ecstatic, and overwhelmed. Should I pay them for the water? How much should I take? Should I clean it? I tried to calculate in my head what I would need, settled on 2 L, and brought my water bottles over to the precious bucket. They were all standing around watching as I poured the water into the bottle. I was nervous and somehow I dropped my bottle and lost almost 300 mL. All the women made this 'tsk' sound with their tongues, and shook their heads. I tried to apologize but felt my face turning red. How could I have been so careless? I was so embarrassed. I felt ignorant and wasteful. As the weeks went by I felt myself adjusting. I didn't spill when I poured from the town pump, I didn't carry my water bottle in public, I didn't bathe but I scrubbed myself clean out of respect, I washed my laundry in the lake but I didn't use soap, I was down to 2L/day max, cooking included - finally I respected and appreciated every ml.

Then I arrived in London and the flush toilet boggled my mind. I went to the sink and found it hard to believe it was there, that there were taps, with water, and it was clean! I pressed down the button to wash my hands, but then I couldn't turn it off – water continued to flow out down the drain. I was appalled. The girl next to me explained that it was automatic to 'save water'. I put my bottle under it and pressed down once again – one push filled the entire bottle – one full litre of water! So this was the minimum amount the engineer figured would be necessary to wash one's hands. I felt sick to my stomach.

Since being home, one of the main objections received about my sustainable consumption ideas is that water is not in short supply, that no harm is done if it comes out of our lake, down our drain, back into the water table – we can't send it to Africa even if we want to. But it's a matter of respect. Why is it so hard to respect a resource so valuable?

THINGS THAT WORK

What other people did

Ryan's Well

When Ryan Hreljac was 6 years old, his teacher Mrs. Prest told the class there are many people in Africa who do not have access to clean drinking water, and who are constantly sick and even dying. Ryan could not understand how some people on the planet could be without any water, while for him it was simply a matter of turning on the tap. He also heard, however, that a well could be built in one of these places where it was so desperately needed for only \$70 (£32.75).

When Ryan got home that day, he went straight to his parents and said, 'mum, dad, can I have 70 dollars?' They said no, but did agree to help him find ways to raise the

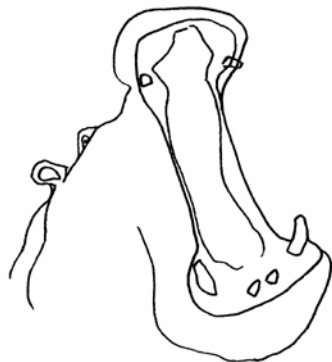
money by doing extra chores around the house for his parents and his neighbours. When he'd raised the money, he took it to WaterCan (www.watercan.com), a charity that provides clean water to developing countries. The people at WaterCan were incredibly inspired by Ryan's hope and enthusiasm, but had to tell him that it actually cost \$2000 to build a well. 'No problem,' Ryan thought, 'I'll just do more chores then!'

Six months later, in January 1999, 'Ryan's Well' was drilled beside Angolo Primary School in northern Uganda. When Ryan was given the opportunity to see his well, he realized that he could do even more - so he did! His parents decided to join him in his cause and formally establish The Ryan's



Well Foundation. To date, Ryan and his organization has helped raise over one million dollars (£467,000) for 461 wells in 16 countries - Uganda, Malawi, Ethiopia, Tanzania, Nigeria, Zambia, Ghana, Burkina Faso, Lesotho, Guyana, Guatemala and India.

www.ryauswell.ca



The Hippo Effect

Briony Greenhill and Cyndi Rhoades could see that lots of people wanted to see and be a part of positive change but didn't really know what to do, or never got around to it. So they teamed up to test out their thinking. Summer 2006 saw one of the worst droughts this century. Briony and Cyndi calculated that a lot of people installing water saving devices in their toilets was one of the easiest and most effective ways to save a lot of water. So they created the Hippo Effect website, with the idea of making it super easy, and even fun, to order a free water saving device. It was so effective they decided to apply the same mechanism to a bunch of other issues - and TheNag.net was born. Their first action? The water nag, where people were reminded to order a free hippo or Save-a-Flush. So far, Nag members have ordered 17,917 water-saving devices, collectively saving over 53 million litres of water per year.

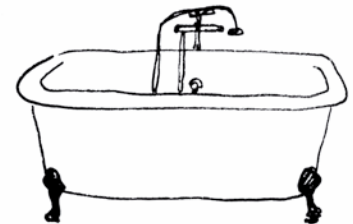
www.thenag.net

The TAP Campaign

Taking on the world's bottled water industry? A preposterous attempt, some might think. But Michael Norton and Joshua Blackburn beg to differ. Inspired by a Dutch campaign called Neau Water, they came together in 2007 to create a new product to highlight the huge flaws of bottled water and bring tap water back into fashion in the UK. Tap, the end result of their collaboration, is an ambitious campaign, ethical enterprise, and fundraising initiative all rolled into one eye-catching package.

By selling empty bottles and asking people to fill them up with tap water, the Tap campaign hopes to expose the flagrant social and environmental costs of bottled water and provide more sustainable alternatives. Their products are made with recycled materials and are designed to bring tap water back into fashion. And just when you thought things couldn't get better, 70% of their profits go to water projects in developing countries, including The Ryan's Well Foundation.

www.wewanttap.com



The global water revolution

Canada – The Cirque du Lake Water Cycle Circus has inspired awareness, enthusiasm, and constructive change by cycling their watery theatre performances around the Great Lakes.²²

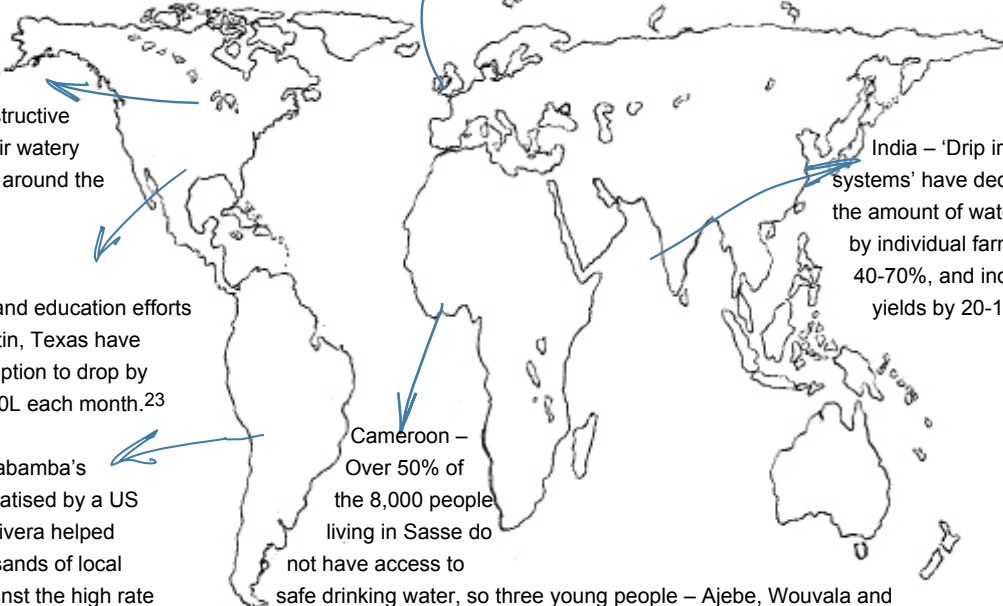
USA – Conservation and education efforts by city officials in Austin, Texas have caused water consumption to drop by approximately 440,160L each month.²³

Bolivia – When Cochabamba's water supply was privatised by a US corporation, Oscar Olivera helped mobilize tens of thousands of local people to protest against the high rate families were paying for their water, successfully cancelling the sale of the city's water.²⁴

Cameroon – Over 50% of the 8,000 people living in Sasse do not have access to safe drinking water, so three young people – Ajebe, Wouvala and Ndifoh – established a foundation to promote Integrated Water Resources Management, which has helped to reduce poverty, improve health, and raise the quality of life for local people – all while protecting the local ecosystems!²⁶

Netherlands – The Young Water Action Team, has established a global movement of young people who initiate or participate in local projects, providing a great forum for youth around the world to share ideas on water. Check it out at www.ywat.org

India – 'Drip irrigation systems' have decreased the amount of water used by individual farmers by 40-70%, and increased yields by 20-100%.²⁵



Off the Shelf - things you can do

DIY Toilet Dam

Whether you already let the yellow mellow and use grey water to flush, or you're just starting out with this water-saving game, you can try this makeshift, water-displacing toilet dam. It'll help you save 1 litre of water with every flush. You need:

- 1 empty 1-L plastic jar with lid
- 1 big rock or anything heavy that won't degrade - pennies, a paperweight, a brick, etc - but not small rocks, since they degrade too fast

What to do:

1. Drop the heavy item into the jar, fill it with water & re-seal tightly
2. Lift the lid off the back of your toilet.
3. Flush the toilet. Once the water's emptied out, place the jar inside the tank. Make sure it's not touching any of the moving parts or impeding their movement!
4. Replace the lid on the back of the toilet. Back slowly away and sneak inconspicuously out of the room.

Off the Shelf - things you can do

DIY Grey Water Recycling

Ever thought about why we use fully treated drinking water to flush our toilets and water our gardens, lawns and plants? To avoid this, create your own grey water recycling system in your house..

You'll need:

- 1 big bucket per shower
- 1 smaller bucket per sink

Collecting the water:

Whenever you're taking a shower or using the sink, keep the bucket under the tap and collect as much as you can of the water that would have gone down the drain. For the shower, this works especially well when you're first waiting for the water to warm up.

Off the Shelf - things you can do

Grey Water recycling can't

Using the water:

- a) Lift up the cover of the back of the toilet tank.
- b) Wait for the black 'stopper' to plug the tank.
- c) Use any water that doesn't have food particles in it to fill up the back of your toilet tank.

Repeat at next opportunity! Use any other leftover water on your lawn, houseplants or garden - except for salad vegetables.

If you want to get ambitious, you can also put a rain barrell under your gutters to collect rainwater too, or buy a water butt.

Off the Shelf - things you can do

Revolutionize your showers

Two quick actions can help save buckets of water when you shower. And, no, neither of them involves avoiding bathing!

1. Take a staggered shower. After you get wet, turn the water off. Soap yourself up, shampoo your hair, then turn the water back on to rinse.
2. Set a timer while you're in the shower to remind you when time's up. Eluned sets hers for 4 minutes.

Brush with care

This one's an oldie but a goodie. Simply by turning off the tap while you're brushing your teeth, you can save several litres of water each and every day.

Say no to bottled water

By carrying a reusable bottle, you'll save resources, save money and take a stance against the commodification of water. For bonus points, donate the money you would have spent on bottled water to water projects around the world.

ESCALATE

How to feed a BIG idea!

Taking the water saving revolution to the streets, er toilets, of the world

If you want to go further, why not be a guerilla toilet-dammer? Once you've perfected the DIY Toilet Dam (see the Off the Shelf section), you can perform this action in your local schools, public libraries, theatres, community centres and other public venues. We suggest placing a note inside – that way if someone finds the jar they know why you put it there.



The note could look like this:

Hi! I am a toilet dam..

I have been placed here by... to save 1 L of water with every flush. (That could be more than 2,000L per year!)

Join the water revolution by putting something similar in the back of your toilet tanks.

Here's a flush to a future where everyone respects H2O - starting, of course, with you.



Still thirsty for more solutions?

Reading - try these books:

- Elizabeth Kolbert (2007). Field Notes from a Catastrophe. Bloomsbury.
- Fred Pearce (2007) When the Rivers Run Dry: What Happens When Our Water Runs Out? Eden Books
- Maude Barlow & Tony Clarke (2005). Blue Gold: The Battle against Corporate Theft of the World's Water. The New Press.

Take a field trip: Visit your local water treatment plant and find out what really goes down.

Calculate your daily water use: Visit www.waterfootprint.org. This tool also takes embedded water use into consideration.

Water footprint of a breakfast²⁷

1 cup of coffee	140 litres
1 slice of bread	40 litres
2 eggs	270 litres
Slice of cheese (50g)	250 litres
TOTAL 700 litres	
1 bowl of porridge	160 litres
1 cup of milk	200 litres
1 glass of apple juice	190 litres
TOTAL 550 litres	



REFERENCES

What we read

1- We read a World Health Organization (WHO) report from 2005 called *Minimum Water Quantity Needed for use in Domestic Emergencies*. You can find it here: http://www.who.int/water_sanitation_health/tsunami_qa/en/

2- Most of our facts from this bit come from the Waterwise website at www.waterwise.org.uk. This organisation is all about promoting water efficiency in the UK, so they really know their stuff.

3 - Waterwise again. Even DEFRA references them!

4 - World Climate. Check out this site: <http://www.worldclimate.com>. It gives up to date weather data hundreds of cities all around the world.

5 - Sustainable Stuff. See <http://www.sustainablestuff.co.uk/SavingWater.html>

6 - IPCC fourth assessment report

7 - And Waterwise again. This fact comes from page 9 of their 2007 report

8 - These facts comes from a World Health Organisation report written back in 2002. You can find the report online at http://www.who.int/water_sanitation_health/publications/facts2004/en/index.html

9 - All the stories on the Water Injustice Around the Globe page come from Maude Barlow and Tony Clarke's 2005 book, *Blue Gold*. This book is also listed in the 'Escalate' section, since it's a great resource and a really good read.



REFERENCES

What we read

10 - Our main source for this section is a Guardian article called 'UK Adds to Drain on Global Water Sources', which was written on Aug 20, 2008 and which you can find at <http://www.guardian.co.uk/environment/2008/aug/20/water.food>. We also referenced a WWF Linking Future Programme report called Virtual Water, which is available online here: http://www.panda.org/about_wwf/where_we_work/africa/where/mozambique/wwf_mozambique__our_solutions/projects/index.cfm?uProjectID=8W0020

11 - You can find this fact several places, including on the Water Footprint Network website - www.waterfootprint.org - and the Waterwise website, in 'The Facts' section

12 - This source is also Barlow and Clarke, *Blue Gold*

13 - Again from Blue Gold. If we were bring literary about it, we might even say *ibid.*

14 - The official drought order can be found online here: <http://www.opsi.gov.uk/si/si2005/20052141.htm>

15 - Flouride Alert - www.fluoridealert.org

16 - Dental Watch, both here <http://www.dentalwatch.org/fl/bfs.html> and here <http://www.dentalhealthwestmidlands.nhs.uk>

17 - *Water Wars*, a Guardian article written by Elizabeth Royte and available online at <http://www.guardian.co.uk/lifeandstyle/2008/aug/23/bottled.water.tap> and Tap website in the Bottle Water is Rubbish section here: <http://www.wewanttap.com/21/bad-water/a-bitter-taste.html>

18 - Again, *Water Wars* Guardian Article

19 - And again (or *ibid.*, if you will)

REFERENCES

Even more things we read

20 - European Commission website in the Environment: Water section here - http://ec.europa.eu/environment/water/water-drink/index_en.html, and also the Chartered Institute of Water and Environmental Management site here - http://www.ciwem.org/policy/policies/bottled_water.asp

21 - Natural Resources Defense Council's 1999 Bottled Water Report, available online here - <http://www.nrdc.org/water/drinking/nbw.asp>

22 - Cirque du Lake. www.cirquedulake.ca

23 - Austin City Connection. ICI Success Stories. Retrieved August 30th, 2004, from www.ci.austin.tx.us/watercon/ici_success_stories.htm.

24 - National Geographic News. Eco Heroes Awards Goldman, National Geographic Prizes. Retrieved August 30th, 2004, from http://news.nationalgeographic.com/news/2001/04/0425_goldman.html.

25 - Micro Irrigation Forum. Success of Drip in India: An Example to the Third World. Retrieved August 30th, 2004, from www.microirrigationforum.com/new/archives/india.html.

26 - Young Water Action Team. Community Water Supply and Sanitation Project in Sasse, Cameroon. Retrieved August 30th, 2004, from www.ywat.org.

27 - This information came from the very useful Water Footprint Network website, at www.waterfootprint.org