There is a finite amount of water in our world and every drop is on an endless cycle of renewal. Do you ever wonder about the water you use today? Where it was last year? And where it will be next year? If our water could tell stories, would they be stories as strange as these ...?

Misheck Kirimi from Kenya travelled miles to fetch clean water, until his donkey refused to cross a river to deliver it.

Mary Cahill Kurpiewski, an eleven-year-old entrepreneur from the USA, learned her lesson selling not-so-holy water to unsuspecting churchgoers.

. Rosalie Castro from the Philippines found floods exciting when she was a child, but now understands the terrible impact they have on communities.

- Paul van Vliet, Unicef Ambassador in the Netherlands, travelled to Eritrea and could not cope with the choice of what to drink in the aeroplane.

Pamela Lee Ann Stier from Brazil tried so hard to take a proper bath in strange surroundings, but failed miserably at the final hurdle.

Brian Little from the UK helped to dig wells in Tanzania but learned a valuable lesson.

Ashish Singh from India was fascinated by the water world of the fish... until the day his world and theirs collided.

This book contains their stories and many others. Some are sad, others are funny. All of them show how essential water is to our lives. The story of water is the story of humanity...











Thousands have lived without love, not one without water.



Published with financial support from ICCO, Fabrique, Provincie Noord-Brabant, WL | Delft Hydraulics and M2D.

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Design: Fabrique, Delft, The Netherlands

Printing: arranged by Meester en de Jonge, Lochem, The Netherlands
ISBN 90-6687-039-7

#### Water Stories

Sascha de Graaf (ed.)



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#### Preface

Water is vital to all life, yet so many people in the world still have no access to safe and adequate water and sanitation facilities. Drilling wells and building the infrastructure is not enough; we need to share knowledge and experiences to learn from each other and to be able to improve our situation. That is the only way to make a difference.

Telling stories is one way of sharing knowledge and experiences. Just as water caters to our physical needs, so telling and listening to stories cater to our mental needs.

Our parents told us stories when we were little and we, in turn, tell them to our children.

We can find joy and comfort in stories. They can convince someone or explain something. Stories help us make sense of the world we live in.

The stories in this book are about water and the role it plays in the lives of people throughout the world. Some of them are sad, others are funny, but all of them show how water is essential to us all in one way or another.

This book is published on the occasion of IRC's 35th anniversary. We decided to publish a book that is a little different from our regular publications. Through personal contacts and our web site we asked people to send us a story or a personal experience about water. Some of them we interviewed. I would like to express my gratitude to all those people who took the time and effort to submit their story. Without their contribution, this book could not have been published.

We left the topic open – as long as it related to water – because we wanted people to use their imagination. We didn't ask for reports or elaborate case studies – there are enough of those – but for specific personal experiences, situations or stories. We wanted to make a book that you, even if you are not working in 'the' water sector, would enjoy reading. A book that expresses the many facets and faces of water and that reveals the emotions of people when they think about water.

Publishing this book will have no direct impact on the 1.1 billion people who do not have access to safe water. But we hope that, through their stories and those submitted by people from the North, it will raise awareness about the many different ways that water can impact people's lives.

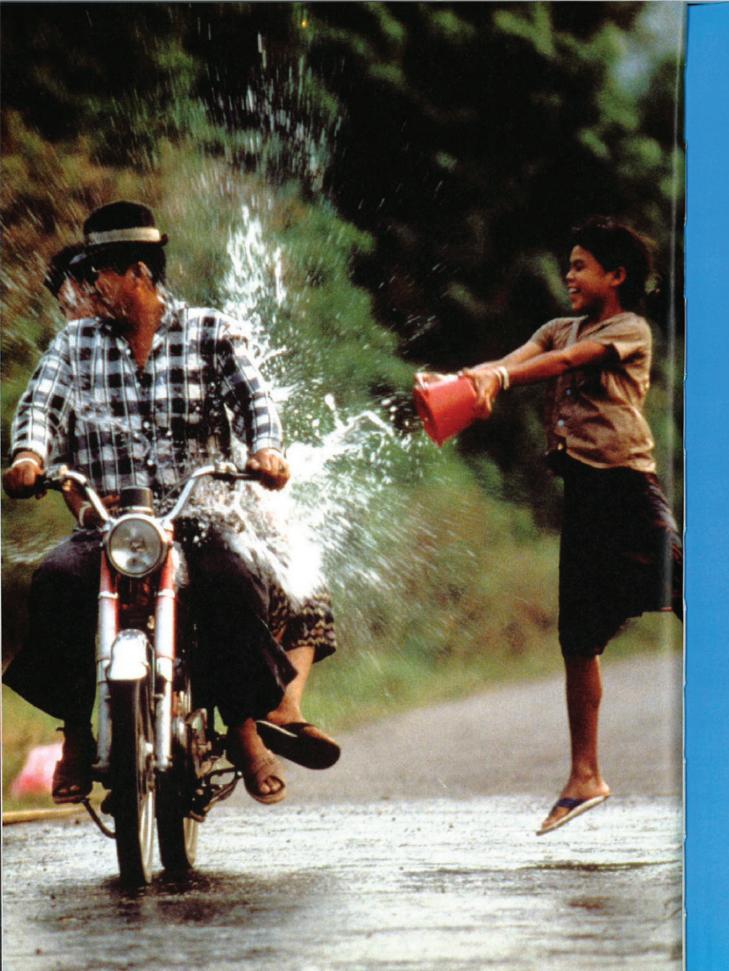
We have tried to reach a balance with regard to themes and places of origin, but it has been impossible to do justice to all the different realities. So we applogise if you feel that we have left out something important.

Reading all the stories that people sent us has truly been inspiring. I've laughed out loud reading some of them and I've been moved by others. Whatever you do, whether you are working in the water sector or not, I hope that you'll be inspired too.

Enjoy!

Sascha de Graaf

Publications Officer, IRC International Water and Sanitation Centre



The average person in the developing world uses 10 litres of water a day.

The average person in the United Kingdom uses 135 litres of water every day.

Source: WaterAi



## Tears of joy

Paul van Vliet, Unicef ambassador, The Netherlands

A few years ago I went as a Unicef ambassador to Eritrea in the Horn of Africa. After a devastating thirty-year war with Ethiopia, the country was completely destroyed. While I travelled around the country, however, I almost always encountered optimism and an unrelenting faith in the future. I saw men, women and children getting rid of all the debris, almost cheerfully. I saw Muslims and Christians working side by side to rebuild the churches and the mosques. Sometimes there are places in the world where it does work.

When I flew back, Lufthansa upgraded me to a seat in what they call Royal class. They probably thought I was a real ambassador! The stewardess asked me what I wanted to drink.

'Whiskey, please,' I said.

'What kind of whiskey? Scottish, Irish or Canadian? With ice or without ice? In a regular glass or a tumbler?' Too complicated.

'I think I'd like a beer, please,' I answered.

The stewardess asked: 'Heineken, Carlsberg, Guinness or a beer brewed for our company by the monks of a Benedict monastery?'

'A glass of water,' I said.

'Regular or with gas? Sourcy, Evian or Perrier?' she asked.

I was completely confused by choice. 'I think I'll wait a while', I said to the stewardess.

So there I was, **sitting back in my comfortable Royal class chair** on a Boeing 747, surrounded by luxury. I tried to focus on the extensive menu and its extensive choices, but my thoughts kept wandering back to the children of Eritrea, who had only one choice – surviving.

On the last day of my visit to Eritrea I was in a dusty, dry desert around the harbour city of Masawa. I was standing by a water pump, installed by Unicef. About 30 children were waiting for their turn to fill their little bucket or jerry can with water. They were dancing, singing and jumping on that dusty plain around that one water pump with a joy and vitality that I'd rarely seen. It was such a beautiful sight that tears jumped into my eyes. I thought: 'The only water source that will never dry up is our tears. Fortunately we can also cry with joy.'



#### Splash

Beverley Nambozo, Uganda

'Bye,' I say to the wave as it rolls to the other side of Ssesse Island. I get up and walk away, my feet leaving prints in the white sand dressed in shells and pebbles. My back is to Lake Victoria, which is blue in the morning and moonlit at night. I do not want to go back to the hot tent. I do not want to go to the kitchen because I do not want to help with the cooking. I turn back to the lake, my friend.

The wave comes back towards me and I run towards it. My feet dig in the sand. My blouse puffs in the wind. The wave has come back to me. Still in my clothes, I run into the lake. Splash. 'Nambozo,' I hear my young sister calling me. She is happily floating on a jerry can as it fills up with water for bathing. 'Hello Naka!' I call back. I feel the waterbed beneath me and long to be like one of the fish that swim in a wet world that never ends. From Uganda to Kenya to Tanzania and the coast, these fish travel priceless journeys. Then I remember the fried fish in nearly burnt onions that we have for supper almost every night and I no longer wish to be a fish.

I see the sun ahead of me. I swim towards it. I swim past women and girls washing their clothes and hanging them to dry on the bushes. I swim past the older children teaching younger ones how to swim. I swim past men taking girls for rides in the small boats. They wave at me. I lie on my back and wiggle my toes at them. I remain on my back looking at the world above me. The sun is not getting any closer. It hides behind a cloud. I swim back to shore, 'Nambozo!' my mother calls me for lunch. 'Coming Ma.'

My sister races behind me to the kitchen. We sit on wooden stools under palm shades. All five of us; my mother, young sister, two brothers and myself. The wetness from our bodies drips onto the sand. The sun comes out again and dries our bodies. It turns the sand on our backs to glass.

Lunch makes me feel as if a heavy animal is sleeping in my stomach. I go to wash the plates and the food particles mix with oil and float away into the stomach of the lake. Sometimes the lake takes in so much rubbish that it just vomits it back onto the shore. I rise early in the mornings to find dead animals, skeletons of fish, dirty containers and beer bottles at the edge. Poor lake!

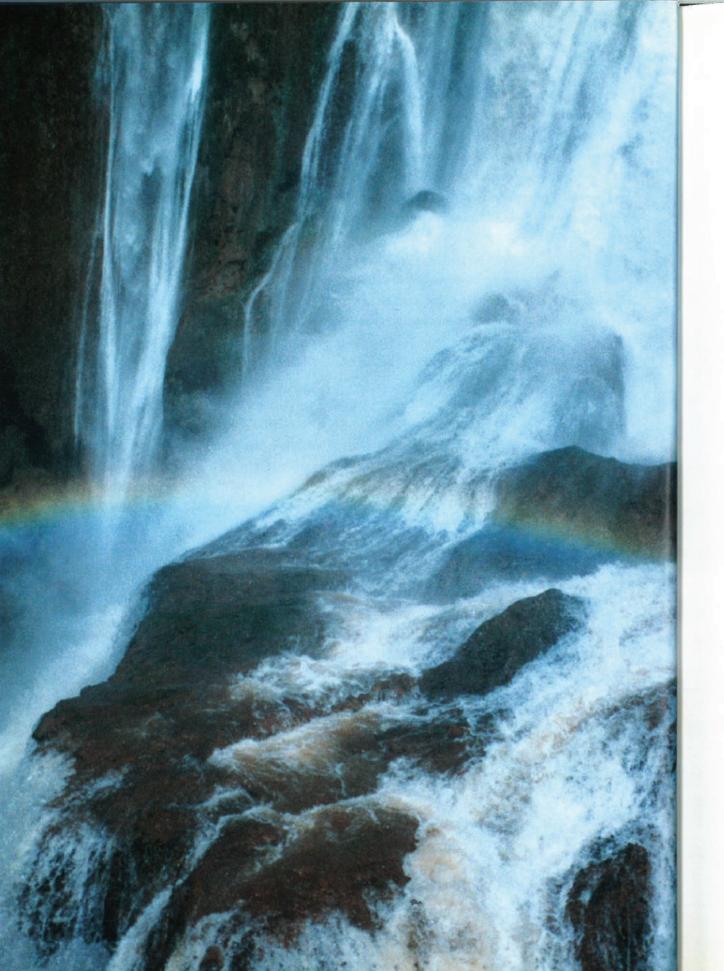
The sun seems to race with time as it sets. Sunset makes me smile. People come from many places in the world to see the Lake Victoria sunset. Tall white men take photos and white ladies laugh when the wind blows their hair in their faces. They pay a lot of money to come to our island, to get their skins red. To them it is an amusement, but to me, when I see the sunset above the lake, I see the beauty of life. The moon will soon appear. The young men will walk their ladies to the shore and they will stare at the moon together and make wishes. The hips of the young ladies look like two animals having a tug-of-war.

I remember that one young man took his woman to the lake and drowned her.

I remember her swollen body the next day. I do not remember if the man was arrested.

The girl's parents cried and left the island. I do not want to think about it any more.

Lake Victoria is my friend, I swim. I dream. I splash.



# Stone dead microbes

Silena Vargas, Colombia

In some rural areas in my country, people believe that water running through wild rivers with lots of stones is safe to drink. They say that the stones kill the microbes, because the river water throws the stones around so violently that they crush the 'bugs'.

One person told me: 'Don't worry, when the microbes fall into the river, they break their necks on the stones!'

# Know your customers!

Brian Little, United Kingdom

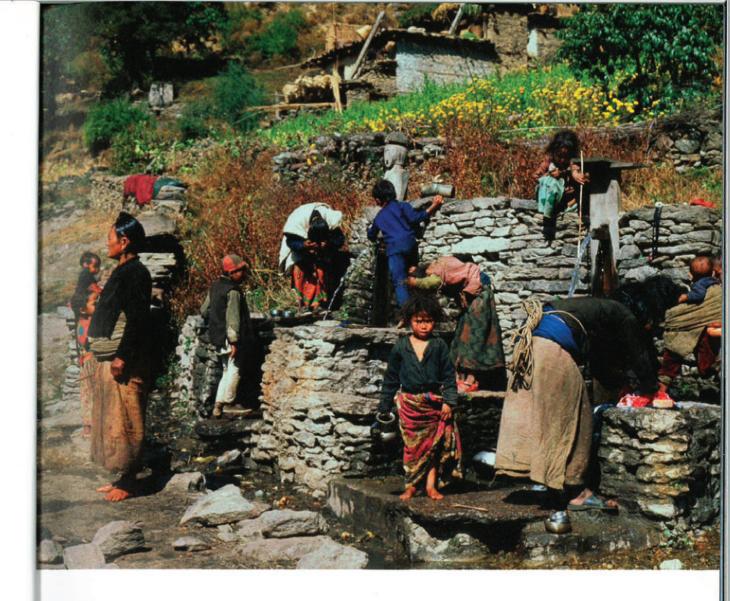
As a young rural water engineer working for the Government of Tanzania around the time of independence, I went walking through the remoter parts of Biharamulo District. I came across an isolated hamlet where the only water supply was a muddy seepage hole used by animals and people alike.

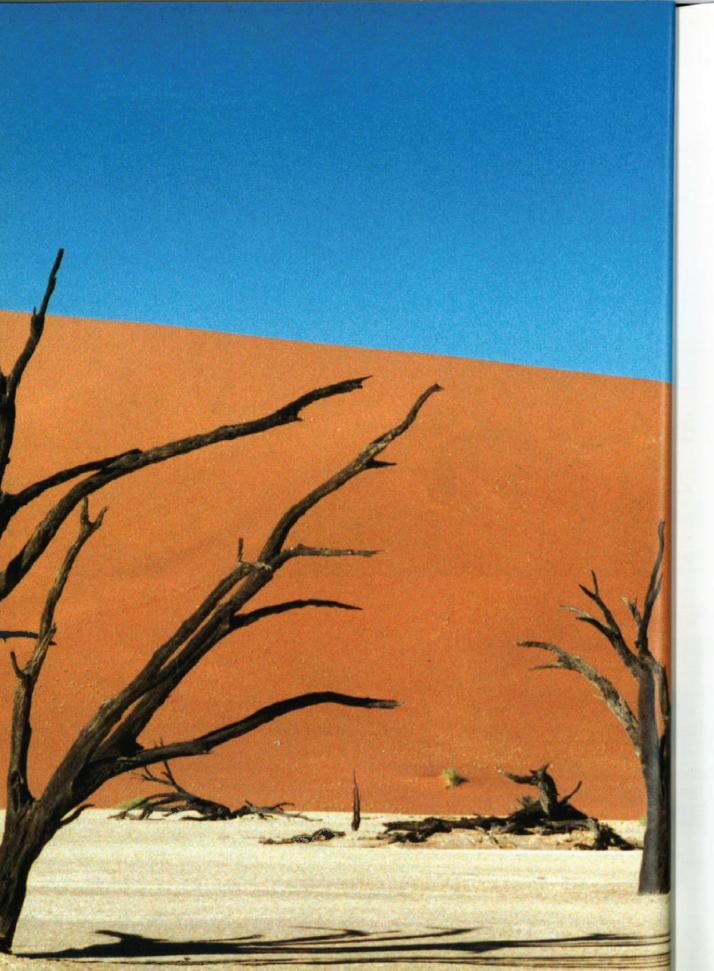
Some women were crouched round the edge attempting to scoop the least murky water from the middle of the puddle with gourds tied to long sticks. They said the puddle was prone to dry up in the dry season and then the nearest water was a stream some hours walk away. After a discussion with what seemed to be the entire village they said they were keen to have a well and would feed and work with anybody who came to help them build one.

I sent my well-digging team and soon there was a concrete-lined well dug near the edge of the village, giving an ample yield of clean-looking water. There was rejoicing at the modest opening ceremony and after serious discussion about how to look after the well and keep the water unpolluted, the new rope and bucket were hung on the wall of the headman's house nearby and we went on our way thinking another job well done.

Some weeks later I visited the village again and found the same women using the old waterhole; the well stood nearby, still full of clean water but apparently unused.

The women agreed they did not use it. On being asked why, one replied, after a long silence, 'Well, you gave the bucket and rope in the care of the headman's wife, and we don't like her ...!'





### **Empty promises**

Enatjenta Melaku, Ethiopia

A village in my country was suffering badly from lack of clean water. Then a water organisation arrived in the village to assess the potential for drilling a well. Local people were very happy that finally something would be done.

The survey resulted in a positive report. The villagers started to look forward to a constant supply of pure water springing from the ground. The team began to drill. Excited people followed every step of the activity eagerly. After a few metres, there was no water. The people were patient – the water had been promised. The team drilled. The people waited. They drilled and drilled. But there was no water.

The villagers were very disappointed. These outsiders had seemed so knowledgeable.

They had talked confidently about their boreholes. And the villagers had waited so long, and been so close. Now they would continue to suffer. Their disappointment turned to grief, and their grief turned to anger. Finally they threw stones at the workers and began to beat them with sticks and anything else they could lay their hands on.

The local police had to rescue the team from the villagers.

What did we learn? Those who work for water agencies are not magicians. We are not gods bringing water to backward people. We are servants trying to help them. We should think twice before we speak, so that we do not make promises that we cannot keep.

#### The art of taking a bath

Pamela Lee Ann Stier, Brazil

Heavy, dark clouds were forming overhead as I looked out of my window. We had just moved onto our property in the city of Contagem, Brazil. On our land of forest and brush, we had cleared a small spot where we were building our home. In the room that my husband built of big, heavy, grey bricks, I contemplated the next job at hand, my bath. It was no simple task.

We had no electricity, no running water and no inside bathroom. I did, however, have a treasured possession, a large bucket.

I gathered my supplies: bucket, towel, soap, clean clothes, and stopped once more at the door to gather my courage. The sky was getting darker by the minute and a cold wind was blowing.

Our outhouse was rather colourful. The rough, crumbly, grey bricks were held together with mud that changed colour as it got wet. Reds ran together with browns, blacks, oranges and yellows. During a bath my clothes on the hook usually took on this colourful array.

We had to draw up water from the well before entering this outhouse to take a bath.

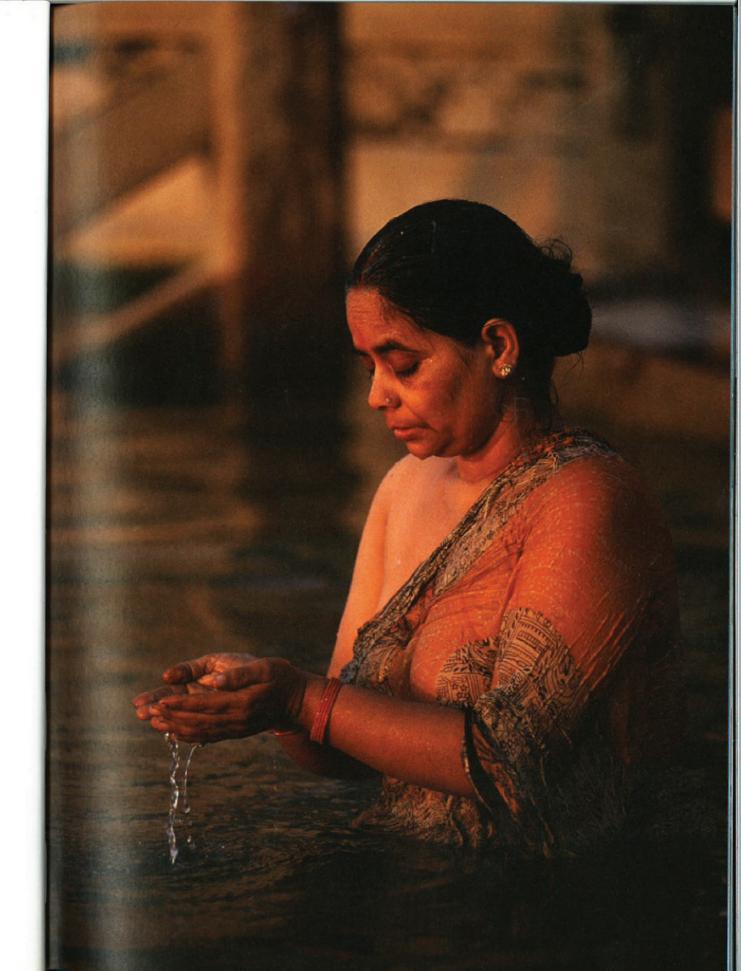
On a cold day I usually threw the water from my dipping cup in the direction of my body, then ducked to avoid the icy water hitting me. This makes for slow going and not a very clean body. I envied my kids, who took a bath in our room with water heated on the stove.

The sun was dim but I thanked God for these beams of light as I entered the grey box, looked up to see if it was going to rain, and got undressed. The wind blew hard across our part of the wild. The plywood outhouse door was not attached and you had to lean it against the bricks and arrange your body to hold the door so it would not blow away.

I was freezing but my clothes were safely on the hook, my body was snug against the door, winning the battle against the wind. Although the clouds were getting darker there was no rain. 'Today,' I thought, 'I am the victor.'

I reached for my dipping cup and, still holding the door in place, carefully turned to fill it from my bucket. I readied myself for the splash of freezing water against skin.

A moment later I knew I had lost the battle of the bathroom... my bucket was empty!

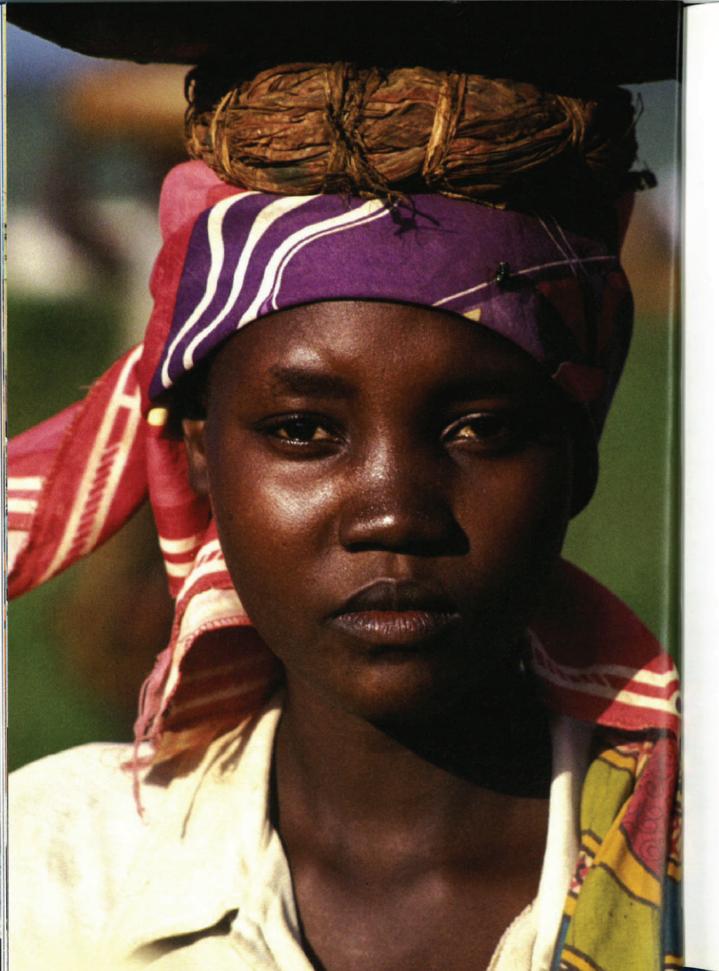




# Water

By Alexander, Vanier Elementary School, Canada

There is water in my basement and it's coming up the stairs!
I hope my mom remembered to move my teddy bears!!
My bed is soaking I have to sleep outside with one thousand wasps and flies!!
The next day it was all gone bye bye whoa see ya!! My bed is dry and I'm alive I fall asleep without a peep.



# The pencil vs. the pail

Nancy J. Haws, Bolivia

Carrying pails of water for others defined Isabel's daily life from the time she was four years old. Each morning, she grasped her little sister Luisa's tiny hand as she slung the two plastic pails around her other wrist. The two of them descended the treacherous path to the world below. It would be hours and many miles before they reached the bottom of this impossible incline, where they filled their pails at the edge of the muddy riverbank. Exhausted, they rested for a short time and stuffed their mouths hungrily with the corn tortillas their mother had cooked for them at dawn. They couldn't rest long because the second half of the uphill journey took much longer, especially with the extra burden of hauling pails full of water. The two girls sighed as they traversed the steep, ancestral path back home to an isolated village high atop the Bolivian Andes.

But today's routine promised a welcome surprise, for Isabel found a pencil on the ground. It had been lost by one of those fortunate few who went to school and drew mysterious signs in books with these magical sticks.

Overcome with delight, Isabel accidentally tripped and spilled one of the pails of precious cargo, the liquid gold that would have bathed her siblings, quenched her family's thirst and added a special ingredient to some meagre potatoes for dinner that night. The parched earth sucked up the moist contents within seconds.

Too intoxicated to care, Isabel stared at her treasure and imagined how she could preserve images with this tool. Perhaps she would trace the outlines of the soaring eagle that followed her like a guardian angel every afternoon. Maybe she could capture the shadow of her grandfather's loving hands as he stroked her hair each night. Instead of making designs with her feet in the dirt, now she could keep her drawings and retrieve them at a moment's notice. Best of all, she might even learn how to write her name in that special code just like the fortunate few did in school each day. Isabel sang all the way home as Luisa followed in amusement.

When the sisters arrived in the doorway of the family's mud hut, their mother shrieked in horror when she discovered only one pail of water instead of two. Isabel explained her mishap but giggled with joy when she handed her mother the sliver of lead encased in wood. Isabel's heart pounded as she gazed at that tiny sliver of hope which held such infinite possibilities.

Filled with rage, her mother snapped the pencil into little pieces and scattered Isabel's broken dreams across the floor. In that very moment, Isabel understood how her life, like that of her mother and all her grandmothers before her, would be measured by a pail of water.

## A donkey, a storm and the enemy's rain

Misheck Kirimi, Kenya

Thirty years ago as a twelve-year-old boy, I was living with an uncle in a semi-arid part of Kenya. My principal duty was to herd livestock and to ensure that the animals got water at least twice a week. I occasionally fetched water for the family, aided by an old, faithful donkey called Sudu.

The dry spell was unusually long that year. Rivers, springs and shallow wells went dry.

There was hardly a green plant anywhere. Brown dust covered the fawn tufts of grass the animals survived on. People went farther and farther in search of water.

Finally there was only one source of water for people and animals. That source was about ten kilometres from my uncle's home. In the best of times no one visited it, because its water had an unpleasant taste.

Sudu and I went to fetch water from that source. We got there early in the morning but our turn to fill the containers didn't come until early afternoon. As we started to walk back home, carrying the precious cargo, I noticed thick, dark clouds overhanging the eastern skies. The whirlwinds blew and trees danced. Shortly there were lighting and thunderclaps. Then tap, tap, tap! The rain season at last. How refreshing!

Soon we were completely drenched in rainwater. We did not complain at this turn of events. The rivers would start to flow, dams would form, and I would find water at home, collected in my uncle's iron tank.

With three kilometres to go, we arrived at a valley that had been dry a few hours before. Now it had become a sizeable stream. The little donkey looked at the stream for a moment. Then he made up his mind not to cross it. If you have never tried to force a donkey into something, you've no idea how stubborn a donkey can be.

I screamed at him. I pulled him by the ears. I begged him to change his mind. I beat him with a stick. But Sudu wouldn't concede.

I had the idea that Sudu would co-operate if he did not have such a heavy load. What was the point of carrying these heavy cans when I would find plenty of sweeter tasting water at home? So I pulled down the cans and poured out the water. But Sudu was no happier. He still refused to cross the stream, preferring to walk up and down the bank.

My only option seemed to be to return without the donkey. But how could I leave this faithful and useful family friend behind in the bush? I felt confused; and fumed at Sudu as a stupid jackass.

Suddenly I heard someone humming a traditional tune. To my relief it was Mugae, who was regarded as being insane, but not a person who scared you. He was more pleasant and interesting to listen to and watch than most people - a funny character, rather like Mr Bean.

Mugae studied my predicament and offered a quick practical solution. We were going to carry the donkey across the stream! Before I had time to consider his proposal, Mugae grabbed Sudu's forelimbs and lifted them onto his broad shoulders! He commanded me to push while he pulled. I had read a comic story about a fool who carried his ass, but never thought I would be that fool.

Sudu kicked, protested and splashed mud and dirt on us, but we pulled and pushed until he was safely on the other side. I thanked Mugae and he went his way, humming a tune of victory.

As we descended the hills toward home, I noticed that the hoof-beaten paths were as dry as ever. By the time we got home there was hardly a trace of the rain! This downpour had been the 'enemy's rain', as my grandmother would have put it, which avoided our borders.

It was late and we were exhausted, but Sudu and I were happy to be home. However, the family had not a single drop of water to show for our efforts,



#### Manchester's party in the rain

Peter McIntyre, United Kingdom

Manchester is a large and proud city in Northern England once known for its manufacturing industry, and a certain bleakness. Today the home of Manchester United Football Club counts itself as a vibrant, multi-cultural European city with a reputation for partying. There is something else to know about Manchester. It can be rather wet. It rains on virtually half the days of the year. Mancunians can be a bit touchy about this, especially if mentioned by people from London.

In 1993 Manchester was bidding to be the host of the Olympic Games for the year 2000 and in July the city welcomed the President of the International Olympic Committee Juan Antonio Samaranch, who comes from another famous football city, Barcelona.

Samaranch expressed suitable enthusiasm as he was shown the highlights of the bid. However, it was difficult to ignore the persistent rain that dogged his visit. Eventually one of the journalists nervously raised the matter at a press conference. 'What do you think when you come to Manchester and find it is raining?'

Juan Antonio Samaranch memorably replied: 'When I find rain in a country, I think always that is a very lucky country.'

Well, Sydney won the Olympic bid for the year 2000 games, and put on a spectacular event.

Manchester was rewarded with the Commonwealth Games in July and August 2002.

The 11 days of competition were a fantastic success, one of the friendliest games of all times, and mostly took place in brilliant sunshine. Until the closing ceremony, that is, when Manchester returned to what it does best: the heavens opened and the rain poured down.

Her Majesty Queen Elizabeth, the Prime Minister and other important people were forced to shelter under giant umbrellas. But the athletes and 38,000 spectators did not let rain spoil a good party. They embraced the spirit of Juan Antonio Samaranch, singing and dancing in the rain late into the night.



# My child's-eye view of the world of a fish

Ashish Singh and Nikeeta Singh, India

When I was three years old, my father kept a big fish tank in the courtyard of our house. I faintly remember a tank with thick grey walls, taller than me, standing almost fortress-like in the corner of our courtyard. My two older sisters and I, a couple of years separating each of us, used to spend hours feeding and watching the fish. Every movement, from a quick burst of speed to a lazily waltzed turn, fascinated us. We climbed three steps built alongside one wall and crowded onto the top one to get a better view. I remember the feel of the cool clear water, and the steel grey fish – one with a silver stripe – in a steel grey pond.

One day, as we were watching, I leaned over too far and fell in. Try as I might, I couldn't reach the edge, and I wasn't going to learn to swim in those precious few moments. What could a child do when his feet would not even touch the bottom? I thrashed at the water and in between thrashes would sink, bubbling sounds, and surface again.

My sisters were close to panic. One started crying but the other tried to reach me, leaning over herself in her efforts. I was growing weak and bloated with water. I was nearing the end of my efforts to stay afloat. On my way down for what might have been the final time, I reached out desperately with my hands and found the hand of my saviour. My sister hung on, and pulled me to the edge. Now I grabbed the edge of the tank with my other hand and both my sisters pulled me out.

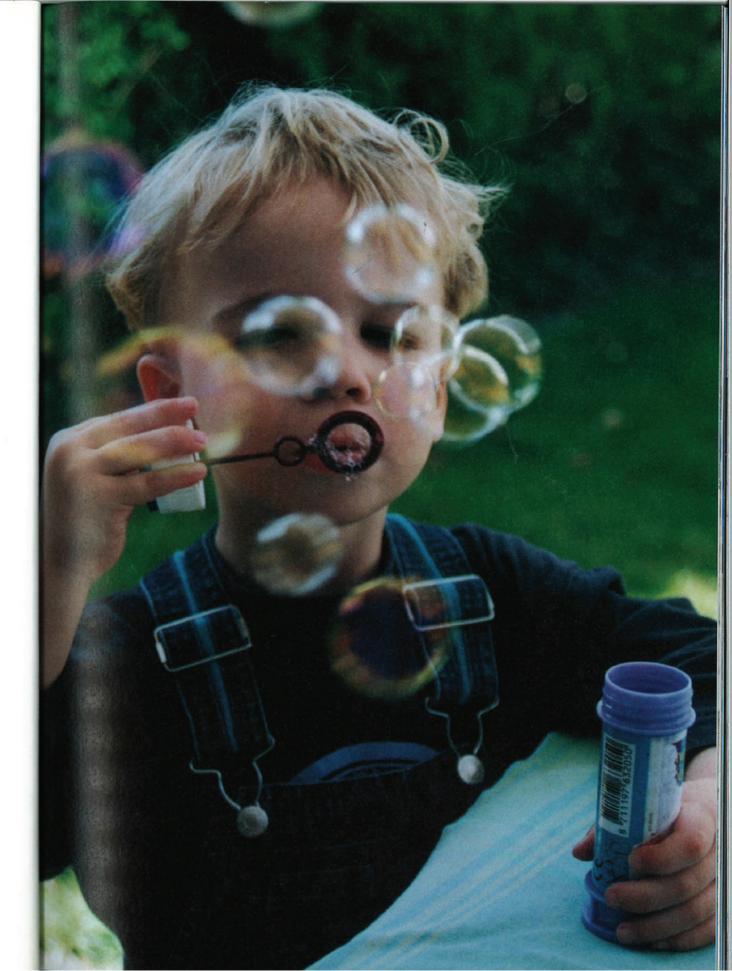
In a blur my mother appeared, and then a doctor. I felt fine in a couple of hours. This was as near a brush with death as I have ever had, and I owe my sister my whole life.

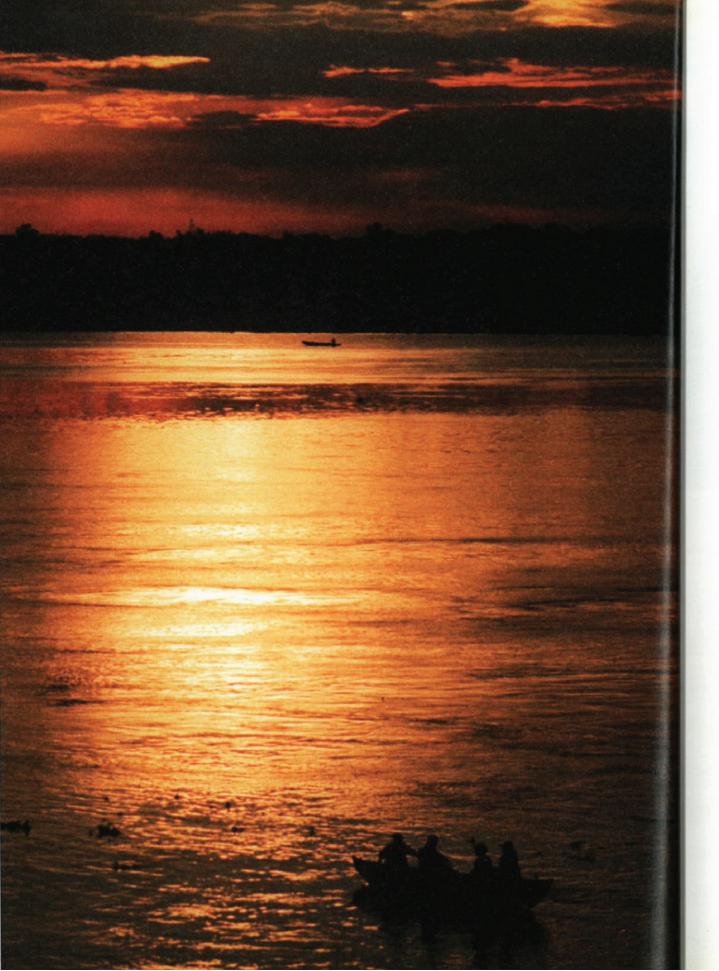
The water had been an alien world, one where I could only thrash the water without effect. No sooner did I get out then the water was its calm and harmless looking self. Who knows what the fish thought when I travelled brutally from my world to theirs and created havoc? Afterwards they went calmly back to what they do best, swimming.

# Willie the Water Drop has an adventure

Jemi S. Katko (9 years old), Finland

One sunny day Willie the Water Drop turned into vapour. Then he became thicker again and joined other water drops. The next morning he felt heavy – and fell down into a small river. The small river took him to a lake. Willie was dirty. Suddenly Willie was pumped to a water intake. He was cleaned there and thereafter he travelled in a pipe to a water tower. He slept there over night. In the morning he woke up from a strange massage. A man had washed his hands. He was dirty again. Then Willie was purified at a wastewater station. Willie the Water Drop had experienced almost everything a water drop can.





# Sang people feel the pain of Tantalus

Rashid Pelpuo, Ghana

In Greek mythology, Tantalus, king of Lydia and son of Zeus, killed his only son and served him at a banquet to the gods. The gods decided to punish Tantalus for the offence. He was hung forever from a tree in Tartarus, suffering continuously from hunger and thirst. Beneath him was a pool of water, but whenever he wanted to drink, the pool would sink out of his reach. So although he was hanging over water Tantalus was always extremely thirsty – which is where the word 'tantalise' comes from.

Sang, a small town in the Northern Region of Ghana, has the same problem, but not as a result of any offence. The town is 'sitting on water' and during the rainy season all its dugouts are filled with water. Its only functioning borehole is in constant use as nearly 2,000 women queue round the clock to fetch a basin of water.

During the dry season, the water vanishes. Women and children roam the land in search of water, which they usually do not find. The single borehole often breaks down during this period.

When you visit Sang they tell you their version of the Tantalus story. They believe that the town is still sitting on water that is hiding from them. They will tell you tales they heard from their fathers, of how Sang was a land of water until the water decided to run away from the growing population and recede to the underworld, only surfacing during the rainy season.

## The butterfly

Arlex Sanchez Torres, Colombia

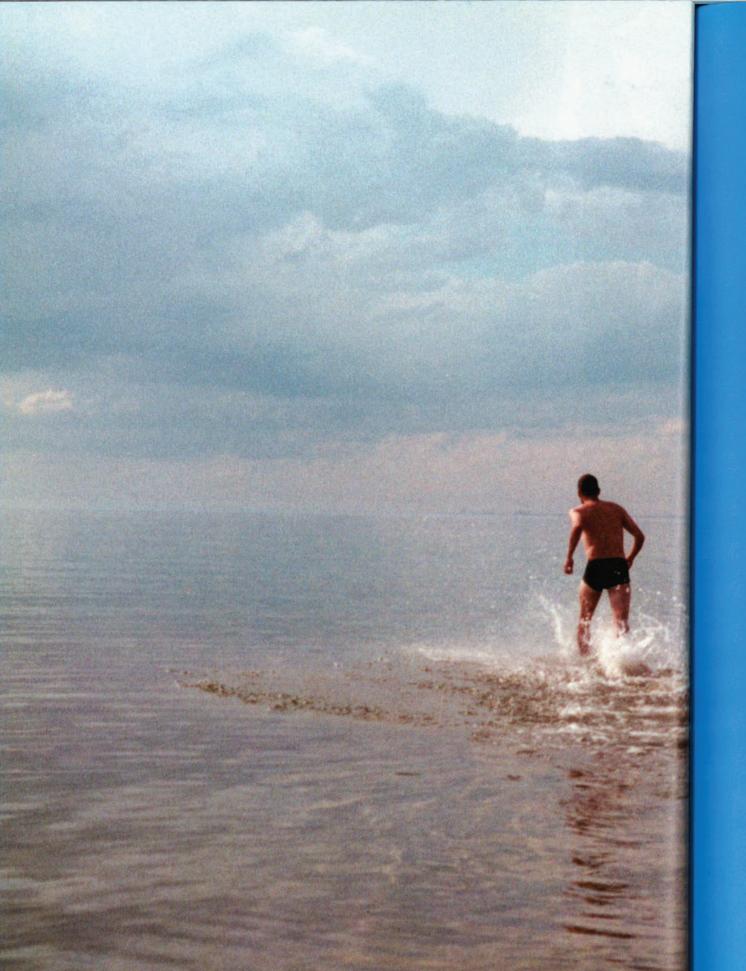
When I was a child, my family used to go to a cabin in the middle of the woods on weekends and holidays to escape from the busy city life in Cali. The cabin was in the tropical forest close to Buenaventura by the Pacific Ocean. My cousins and friends would join us and we would play together in the forest and by the river.

Our cabin did not have electricity or water. We cooked on fires that we built from the wood that we found. To bathe, we used the river. Every morning we saw a very big blue butterfly flying above the river. It would never fly above the ground, only above the water. We always felt that in some way, the butterfly was guarding the river.

The river was too polluted for drinking water, so we had to be creative. From a tree we made a wooden half-pipe. We put one end of the pipe into a clear little stream that ran down a slope close to our cabin. We put the other end in the kitchen. The water ran through the pipe from the stream to a big bucket in the kitchen. That way we had drinking water.

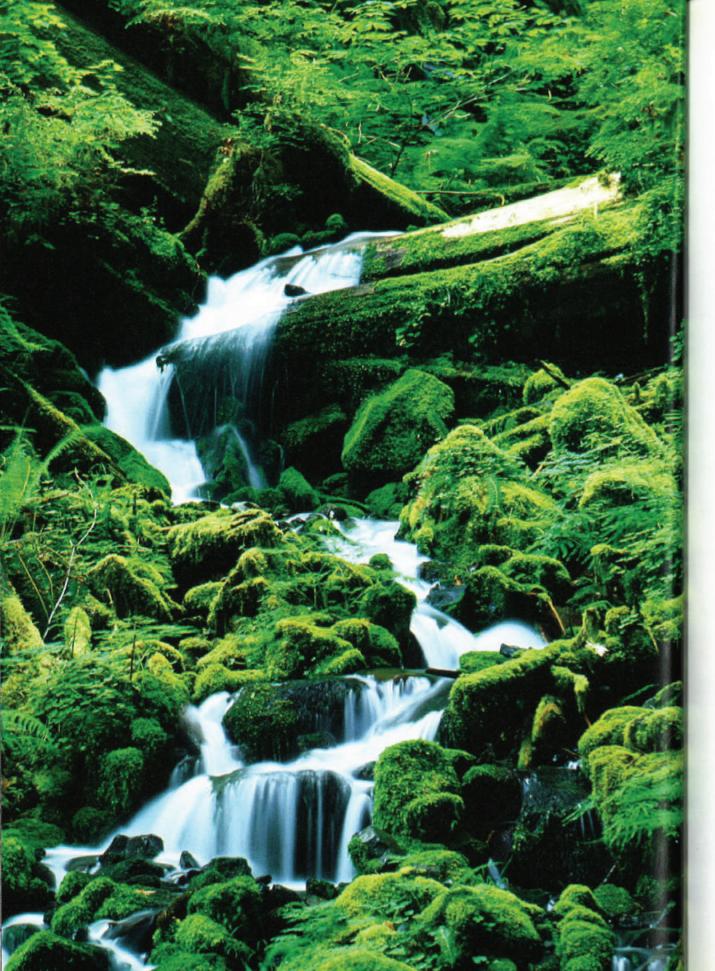
Water has always played an important role in my life: I now work as a water engineer.





Sometimes, when I feel sad or lonely, I talk to the ocean.
She never answers, but always makes me feel better.

Lorenzo Mira, Argentina



## The origin of the Amazon

A Juruna Indian, Brazil, Source: adapted from Rádio TV do Amazona:

The Juruna Indians lived close to the forest where there was no river. A bird called Juriti owned the drinking water, which she kept in three barrels. One day, the children of chief Cinaã were thirsty. They went to Juriti and asked her for water.

But Juriti wouldn't give them any. 'Go back to your father,' she said, 'After all, he is the Pagé, the big chief. Why doesn't he get water for his own children?'

The children went home crying from thirst and told their father what had happened 'Don't ever go to Juriti again,' said the chief to his children, 'Her water barrels are full of fish. It's too dangerous.'

But they were tempted by this story and a while later they went back. When Juriti was not looking, they broke the barrels so that the water flowed out. When Juriti realised what had happened, she got very mad. The children were afraid and jumped back, but for one of the brothers, Rubiatá, it was too late. A big fish flowing out of one of the barrels swallowed him.

Although it was a big fish, Rubiatá's legs stuck out of its mouth. Meanwhile the other brothers started to run away, carrying the open barrels. The water that spilled from the barrels turned into rivers and water falls. The big fish with two legs still sticking out of it's mouth formed the Xingú river.

The two other brothers kept on running, all the water now spilling from the barrels. That is how the Amazon river started. In that big new river they found the fish and their brother, Rubiatá, already dead. But, when they cut out his legs and blew air into them, Rubiatá became human again. The children went back home after their adventure, and triumphanticular told their father: 'We broke the barrels and from now on we will have water and we will drink for the rest of our lives.'

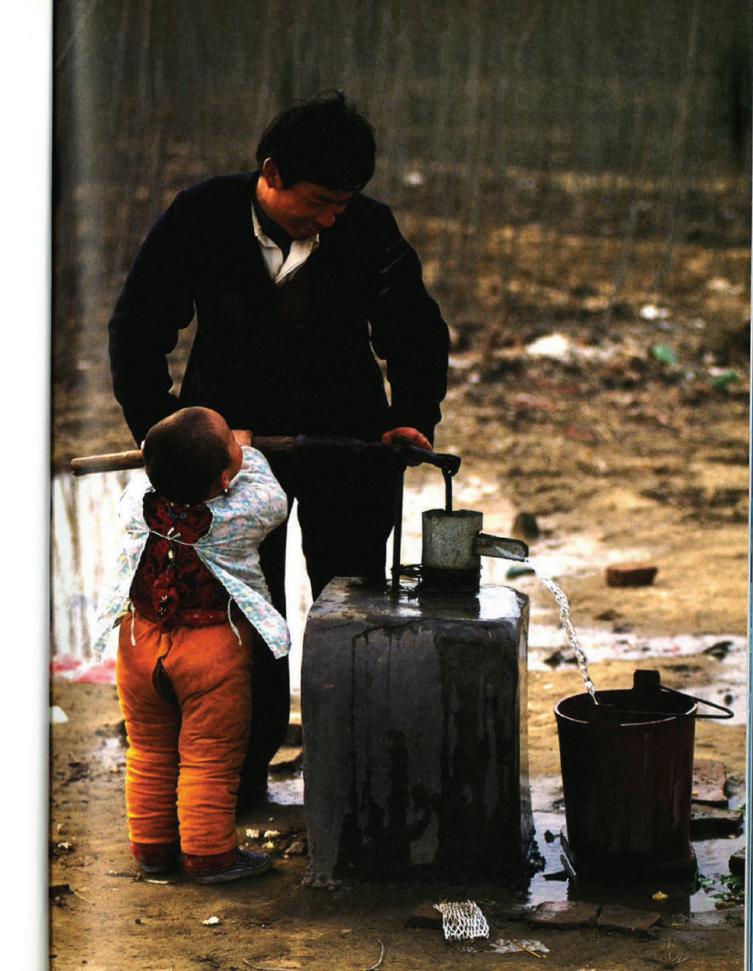
# Water magic

Arturo González, Mexico

In 1997 hurricane Pauline hit Acapulco city in Mexico. The city water supply system collapsed and there was no drinking water. I went to Acapulco with some colleagues to offer emergency help. We took with us a mobile water treatment system that we normally use for research purposes.

The system was installed in an existing well and quickly put into operation. Because the capacity was limited, people had to queue with their buckets and other containers.

A ten-year-old boy standing in the queue was watching the treatment process with increasing fascination. As the system turned chocolate-coloured water from the well into a clear stream for the buckets, he could contain himself no longer and shouted: 'Wow, magic!'.





# The old man and the termites - they know

Jean Yves Clavreul, Ivory Coast

A drilling team arrives in a little village close to Ouaninou in the western part of Ivory Coast. They are greeted with celebrations and excitement.

The team is armed with satellite readings and maps that show them where they will find water. The whole village, especially the women, turn out to watch them as they start work, delighted at the thought of clean water for the whole year. No more long daily walks to water points in the dry season. No more suffering from the guinea worm, and no more sad funerals of people who die before their time.

Everyone leaves their work to see with their own eyes the water rushing out of the ground like fireworks. The teachers have to stop teaching, because the students run from the classrooms to be there when the miracle happens.

But the miracle does not happen at once. The first hole finds nothing and the drilling workers shift their equipment and carry on in the stifling heat, maps in hand. Little by little the villagers leave the drilling site and take up their daily activities again. As the days go by the team moves its truck to a number of different places. The satellite data says there is water. The powerful drill comes up empty. Almost three days of intense labour and not a trace of water. Their hopes turn to despair, drop by drop, in silence.

The old man watches for three days. Every time the team starts work, he is there in his chair. He admires the tenacity of the workers, and he assumes that their impressive technology will solve their problems.

But by the evening of the third day, the old man cannot contain himself. He approaches the man in charge, who can no longer look the villagers in the eye. He stares instead at the dusty ground. The old man says: 'I admire your courage. You are doing everything in your power to give us water, but may I give you some advice? In my long life I have observed that nature teaches us everything we need to survive on this earth.

'The water runs beneath the earth in small brooks. We cannot see these little brooks beneath the earth, but they exist. I have noticed that in the dry season the termite hills continue to grow. And termites need a lot of water. They look for water in the brooks deep down in the earth. I know the location of the termite hills in the fields around the village. I will show you. Put your machine there. You will find water.'

The next morning the drill is in place. The team starts drilling. By noon the village has water.



# Rain is always a blessing

Gail L. Fiorini-Jenner, United States of America

'Rain is always a blessing, no matter when it comes.' This is a favourite saying of my husband, who is a farmer and rancher. During my thirty-two years as a farmer's wife, I echoed his words whenever our restless children complained about long, cold, wet winters or about having to help their father feed cows, mucking through ankle-deep mud and manure.

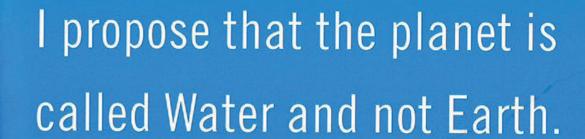
I rejoice over the rain, even when it batters my summer garden or fall flowers or ruins an afternoon walk. Even when it damages a field of freshly-mowed hay that seemed so perfect.

Even when an unexpected August thunderstorm pummels the beds of colourful flowers I'd nurtured in preparation for our only daughter's wedding. Peering out of rain-streaked windows at the remains of pansies, daisies, and zinnias days before the event, I sigh and put aside my disappointment.

'A sign of blessing,' I remind myself sternly. 'Our life's blood,' I whisper to our daughter. She nods and gathers up a shaky smile. 'Perhaps we can borrow some potted plants from the neighbours.'

Rain is a promise that renewal is on its way. Freshly planted fields will produce, hopefully, an abundant crop. The water table will be refilled, insurance against the dry summer months. Animals will have enough to drink, and rivers and creeks will teem with life.

'Never take rain for granted,' cautions my husband as he studies the gathering clouds on a summer day. 'It brings new life.'



Nicolás Tammarazio (13 years old), Argentina





#### First impressions...

Corine Otte, The Netherlands

After a beautiful fifteen-hour bus ride from Casablanca through the snowed peaked High Atlas, I finally reached Todgha valley in Southern Morocco where I would carry out my thesis. I could not wait to get off the bus. I read a lot about this place and was very excited. But when the bus departed and left me with my luggage in the middle of the main road, the only thought that crossed my mind was 'Oh no…' It looked dry, dusty, and empty. Where were the date trees with snowed mountain peaks in the background? This was not the exotic setting I had in mind.

The next day my supervisors took me to the place where the Todgha 'river' starts. To me, a Dutch girl, a river is an overwhelming waterway, used by large ships. Instead, I found something little more than a stream, 20 centimetres deep, that could only be a playground for children's boats. One-third of its journey down the valley, the surface water stops. From this lower part, people get their water via wells and an ingenious ancient irrigation system.

But despite its apparent size, the river creates a lush green valley. I could not believe that this little river could provide enough water for 70,000 people in the valley.

The way the people could cultivate so much with so little water made a big impression on me. Everyone uses the water carefully, but everything is green.

The scarcity is even more striking because water is in abundance on the other side of the High Atlas, and causes floods.

Six months later as I was waiting for the bus to take me back to Casablanca, I remembered my thoughts when I had first arrived. I smiled to myself. Never would I trust my first impressions again.



#### Sinnan and the Shannon

Christopher Moriarty, Ireland

Deep in the heart of Ireland, on the slopes of Cuilcagh Mountain, there lies a tear-shaped pool. Ancient willow trees cast a shade over it and a clear stream flows out, across the green pasture and down to the valley below.

Thousands of years ago, a forest of oak trees grew where sheep now graze and above the pool stood a magnificent hazel tree. Through this forest, on a fine autumn day, the golden-haired Sinnan wandered, gathering luscious blackberries and big brown hazel nuts.

When she came to the pool, she admired her reflection in the still water for a moment and then walked over to the big tree. She seemed to hear a voice telling her not to reach out for these nuts – but she was a spirited girl and she went ahead and picked some.

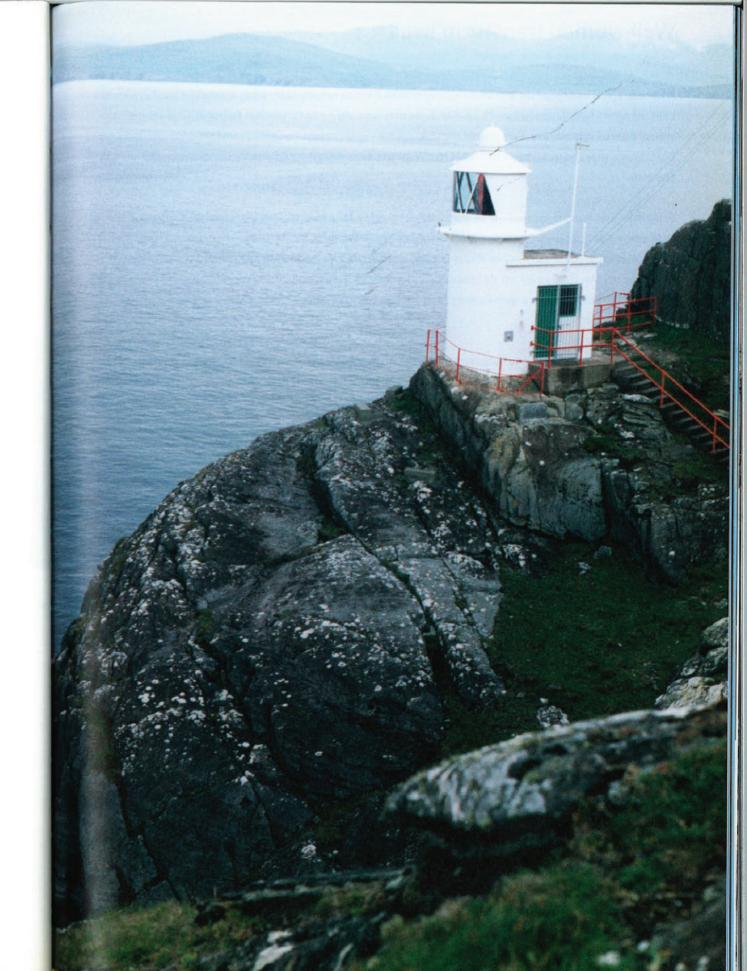
They were fine nuts, so big and brown that she decided to eat some then and there and not wait until she had taken them home. As she cracked a shell, she heard a clap of thunder. That wasn't imagination and it was certainly an odd happening on a sunny day – but Sinnan wasn't frightened of thunder.

She tasted the nut – and it was very good. But the moment she bit into it, she was suddenly aware that this was no ordinary hazel, but the tree of knowledge. She knew this because she had been transformed from a girl who was merely beautiful and clever to a person in possession of all the knowledge in the world. And what was more, she realised – too late – that no mortal who had tasted these forbidden fruits could survive.

The quiet pool erupted. A great torrent of water gushed out, cutting a deep trench through the forest and carrying poor Sinnan far, far away. The water never stopped flowing. It surged down the mountainside, cutting a channel for itself in soft ground, spreading far and wide to make great lakes whenever there was a rock barrier it couldn't cut through. Sinnan cried to the gods for help – but the gods would not rescue a mortal who had violated their sanctuary. Sinnan perished in the flood, long before the water reached the ocean.

Moved by her youth and beauty and innocence, the gods decreed that Sinnan should give her name to the torrent that carried her away, and now it is known as the Shannon, the greatest river in Ireland. Sinnan has remained the guardian spirit of the river that is as beautiful and as spirited as she was when she tasted the nuts of wisdom long, long ago.

The Shannon has served the people of Ireland well. Salmon and trout and eel provided fine food for those who lived by its banks. For thousands of years it served as a highway. The early Christians built monasteries beside its waters. The Vikings used it as a water road. Today the strength of the river creates pollution-free electricity. It is still a waterway where people, tired by the pressures of life, relax in a quiet haven of nature.



#### Well women transform lives

Lucy Akanboguure, Ghana. Source: WaterAid

A decade ago, I had to get up at 3 AM every day to walk 5 km to collect water from a river. I did not arrive back home before 10 AM, which meant I was often late for work at the local school where I was teacher. Sometimes my children had water to wash and for breakfast. Sometimes, they did not. They often went to school late and without food because of my absence.

Fetching water took up most of the women's day. Lack of water often resulted in quarrels, wife beating or even divorce. During their dawn journey to the river, women were sometimes bitten by snakes, while others fell and were injured. In the long dry season from November to March quarrels would break out in the fight for water, and during the raining season diarrhoea, dysentery, guinea worm and cholera were rife. Many children were severely malnourished.

Because girls were expected to help, very few enrolled in schools. In many deprived communities only one woman is educated for every 30 men. I was the only female teacher in my school.

In 1994 I heard about WaterAid's work in Ghana. I organised our community and applied for assistance. In 1995, after several meetings, the project was agreed and the first two hand-dug wells were constructed. The community provided labour, contributed funds and bought the handpumps. WaterAid provided skilled labour and materials, and its partner organisation Rural Aid monitored the project, provided support and lined the wells.

The community maintains and manages the handpumps, using funds that we contribute monthly for repairs.

On the first day after the handpump was installed I woke up at 6 AM and cried out because I was too late to fetch water from the river. Then I realised that my excited children had woken earlier and filled the water pots with clean water and were already preparing breakfast.

Since then life in my community has been more peaceful. Men and children, as well as women, fetch water for all their needs and there is a remarkable increase in school enrolment for both boys and girls. Our primary school is now fully staffed because teachers are willing to accept jobs where there is water nearby.

Women's lives have been greatly enhanced. They have time to look after their families and earn money by weaving or farming. Women have become more involved in decision-making and can take up leadership roles – something that was unthinkable before. They are seen as equals. Communities manage local and environmental resources, which in turn has led to improved living conditions and better health.

I feel so happy having water at my doorstep, 24 hours a day, knowing that my children are safe from water related diseases. And value was added to my life once I also had access to a toilet.

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A frog realises the importance of water only when the sun scorches its back.

Emmanuel Banda, Zambia

#### Water works

Mary Cahill Kurpiewski, United States of America

The week before Holy Week, in our very strict Catholic family, was a very special time with fasting, abstinence and lots of praying. On Holy Saturday, the day before the resurrection of Jesus, it was a custom to bless every room in our home with precious holy water from the church.

I used to go to church with my older brother or my aunts to fill jars with holy water. My mom would use it to bless the house and we would all say a prayer. My brother, Tommy, had collected a quarter here and there for bringing back the water for our mom and the neighbours. When he was 17, he felt too sophisticated for this job, and so I, at the age of nine, carried on the tradition.

The next two Easters, I pulled my brother's unused Red Flyer wagon to the church with jingling mayonnaise and peanut butter jars given to me by neighbours. I filled them and carefully delivered the holy contents, pocketing quite a few 'donation' coins in the process.

The third year I thought, why not turn this into a business! I took on my girlfriend Dorothy as a partner. We collected lots of jars, more than doubling the number from my first year. But the mile walk seemed just too far, especially as the sole of my shoe kept flapping back and forth.

The next Saturday morning, I pulled the wagon full of clinking jars into my side alley and proceeded, much to Dorothy's horrified amazement, to fill them with water from the hose. I explained that God would surely bless the water anyway, and we could put an extra quarter or two into the collection basket. She hesitated, but knew better than to argue with me. We delivered the 'unholy' load and retired to split the profits, 70-30, in my favour, since, after all, I was the 'brains' of this water operation.

Well, 'brains' got caught. Filled with remorse, my partner confessed. Mortified, my mother took me to see the pastor. The Monsignor told her not to worry. He would say a prayer of blessing for all the families who had received the water and my mother would not have to confess her delinquent daughter's misdeeds.

I took a browbeating from the stern priest. At the end he asked me, 'Well, Mary Bernadette, have you learned your lesson?'

I said nothing, but went home in silence. There I reflected on the bitter lesson of my experience. From the depth of my experience as a twelve-year-old entrepreneur, I concluded that the real lesson was: 'Never take on a partner!'

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### An annual event

Rosalie Castro, Philippines

San Luis Agusan del Sur is a small village close to a river in the Philippines. Every year floods ruin our rice and cornfields. I remember as a child that when a flood reached the back of our house we rushed to get all our stuff into boats and move to my aunt's house a bit higher up. I used a water container as a floating device and that's how I learned to swim: holding on to the container, and using my feet.

As a small child I thought it was very exciting learning how to swim and putting all our stuff in the boat. Now that I'm older I understand that it is very difficult for my parents. Every year they move away from the river and then after the floods have gone, back to their house.

If there is a flood, my parents are not earning money, so they depend on local politicians to give them enough rice to survive. They cannot leave the area because all facilities, such as wells, are near the river. The land higher up is not developed. It is also the area where they grew up and it's difficult to leave all their family and friends behind.

I live in the Netherlands now because of an exchange programme. During this time the floods will affect our village again. I hope my parents are okay.





# The forbidden tap

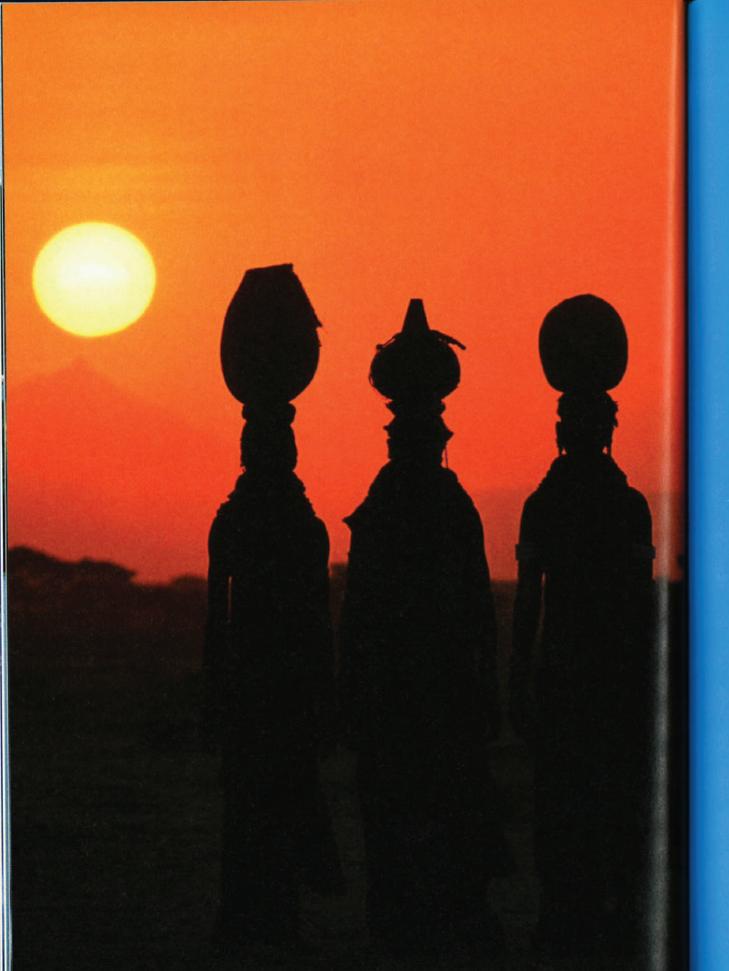
Corina van der Koppel, The Netherlands

I travelled to India from the Netherlands for a work experience project. My first days were spent in a guest house, a hut comprising a small living room, a bedroom and a bathroom, which had a hole in the ground and a sink. On arrival I was strongly advised not to drink the tap water. At first I took notice of this warning, but after a few days of nothing but unpleasant tasting bottled water, I was increasingly drawn to the 'forbidden' tap and its clean looking water.

At first I just took a swallow now and then while I was showering, with no ill effects. In my arrogance I then told myself that I had a healthy constitution and that I could safely have an occasional drink. I took big gulps of the tap water.

A few hours later, my body started to protest and I began vomiting. I will spare you the details but I got to know my bathroom rather well then. I spent hours there, positioned so that the toilet and the sink were both within reach.

A while later, after my body had rid itself of all the undesirable bacteria, it seemed wiser to stick to bottled water. While I'm not one to simply believe everything I'm told, it seems better in some cases to trust the advice that's given.



The average distance that women in Africa and Asia walk to collect water is 6 kilometres.

Source: WaterA

#### Red wells, green wells

M.I. Zuberi, Bangladesh

Shahida was a village girl like a million others in Bangladesh with a sweet smile and bright twinkling eyes. In Sharisabari in Central Bangladesh, she was preparing for the final examination at the local school, hoping to become a teacher and support her three younger sisters through their studies. Meanwhile she worked to help her ailing mother and sisters.

Her father had been a freedom fighter in the Liberation War, and was working at the local jute mill. But then members of the family began to be sick without apparent reason. Shahida's father could not find the energy to go to work. Her mother became too weak to cook their meals. Shahida had frequent headaches, nausea and stomach trouble. She stopped going to school. Even her small sisters stopped their games. Other families in the village had the same experience - is it a curse from hell? The local health centre could not tell.

For two long years Shahida's family and the village continued to suffer. Her father lost his job. Shahida gave up her studies and her dreams. They had to mortgage their small plot of land, to have half a meal every day. One morning Shahida's father noticed small warts on his palms and toes; unbearable pains and blisters compelled him to go to the hospital in the city with his neighbour. The skin specialist examined them both and told them he had other patients like them. He said that arsenic in the tubewells dug to replace shallow wells in the village was the cause of their illnesses. They were given ointments and vitamins and told not to drink water from the wells.

They returned home sick, tired, and with their money exhausted. The people of the village were shocked to know that the tubewells were the cause of their sufferings. They had no alternative sources, because all the dug wells had been destroyed.

The village suddenly became important: many visitors came in cars and jeeps. Some took photographs of the villagers' palms and toes, some collected water from the well. 'Do not drink water,' the visitors said, but they offered no alternative solution.

Someone from the Health Department painted all the tube wells red and said: 'Don't drink from these, use water from the green ones instead.' But there were no green tube wells in the village.

Shahida's father died few months later, leaving the family sick and suffering with nothing to eat and only arsenic contaminated water to drink.

Then an international organisation donated ten arsenic removing filters to the village. With the help of teachers and students of Rajshahi University, Shahida's village now has arsenic-free water again. Shahida has support to go back to school.

She has lived to tell her story. But this is also the story of thousands of families in hundreds of villages all over Bangladesh and other parts of South East Asia. The tubewells were sunk to provide them with clean water. But they brought illness and death. Millions like Shahida are waiting for help and support. Will they ever get safe water?



# Water balloon, water balloon

By Patrick, Vanier Elementary School, Canad

Water balloon, water balloon why did you die so soon because when you drop you pop pop pop water balloon, water balloon.

#### Swimming through

Nancy Moffett, United States of America

I remember being lowered into the huge blueness of the YMCA pool; the sharp smell of chlorine, voices echoing off the walls of the damp, cool room. A woman held out her arms to catch me as my legs disappeared into the liquid.

I'd never seen a pool. The only waters I knew were muddy creeks and a small man-made lake. Perhaps it was in that lake at the age of six that I caught the virus that made me ill, so that the doctor ordered an ambulance to whisk me to hospital for a spinal tap.

I had polio in 1950, three years before the Salk vaccine ended the ravages of one of the world's most contagious, destructive diseases.

For days I lay in bed behind doors marked 'quarantine', attended by face-masked doctors and nurses. I remember the smell of wet wool when the nurses wrapped steaming hot cloths around my legs. Sister Kenney, an Australian nurse, developed this treatment after seeing aborigines treating polio with moist heat. She also recommended intensive physical therapy after the infection was gone.

When I came home, I began countless hours of lifting my reluctant legs to rebuild leg muscles. At the YMCA, the therapist moved my legs in the friendly liquid. I loved those pool sessions because the water made the exercises less painful.

I took my first steps months later. One year after contracting polio, I walked and skipped back to school, back to my life before polio. I never looked back. I thought of polio as just a bad dream. All I wanted was to be like my friends.

But the comfort of those water sessions stayed with me. I loved splashing in the country creek near a friend's house. At camp, I jumped eagerly into the pool. I swam and dove with enthusiasm, earning all my Girl Scout swimming badges and passing Junior Life Saving when I was 13. As a young mother, I took my daughters to swim at a spring-fed lake.

I looked forward to slipping into the cold water for the first time each summer.

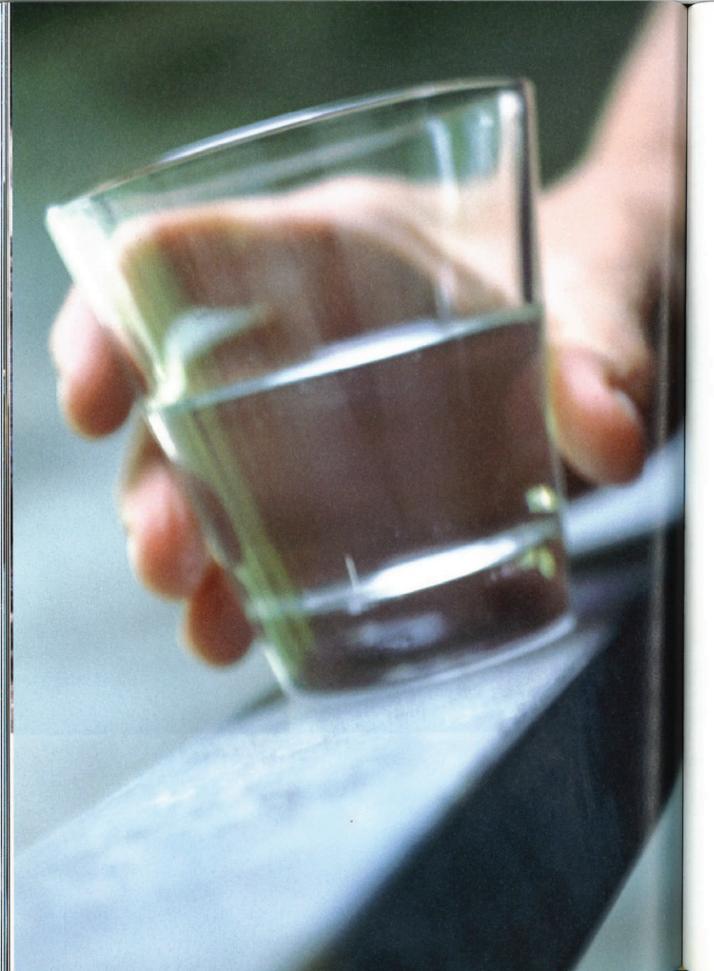
When I reached my 40s, the disease I'd forgotten I had crept back into my life. My leg muscles twitched after long workdays. Pain in my legs followed. I had bouts of fatigue. I saw an article about 'post polio syndrome' (PPS). Was it possible this forgotten disease was back? Testing at a post-polio clinic showed muscle and nerve loss.

Over the 14 years since the doctor diagnosed PPS, I have had to adjust to a body that can do less and less.

There is one place where I find relief. When I slip into the pool at my exercise club, the water welcomes me, just as it did years ago. The pain disappears. I use my arms to pull through the water, fast enough to raise my heart rate. I swim the breast stroke and crawl and immerse myself in a place where I feel whole again.

The pool is my salvation. Swimming gives me a place where I rejuvenate, mentally and physically, then emerge to face whatever new challenges PPS throws my way. And after a swim, the hot, bubbling water of the whirlpool eases aching nerves and muscles. As long as I can swim, I know I can keep moving through life's journey.





## Mixed emotions

Silena Vargas, Colombia

A new water supply system was about to replace the old one in the Cauca valley.

This meant that the old water system had to be destroyed, or its poor quality water would become mixed with clean water from the new system, creating a health risk.

We discussed this at a workshop. The community, and especially their leader who built the old water supply system, protested vigorously against destroying it. The discussion became heated and I was worried. I was afraid that all that we had achieved would be put at risk. I had to think of some way to convince the leader that they should not mix the two systems. While people were talking in groups, I went to the community leader and invited him for a drink. He was very surprised, because he considered me to be his enemy.

As we set out for our drink I quietly asked a young boy from the workshop to quickly run to the river and bring me some water. When we arrived at the local shop I ordered a bottle of water and two glasses. I half filled the community leader's glass with the bottled water. I then added to the glass a small amount of the river water and offered it to the community leader to drink.

He looked at me as if I was crazy. 'You expect me to drink that?' he asked astonished and angry. Then I saw something change in his eyes. He looked at me with a smile and nodded. He understood what I was trying to tell him. We drank some clean water from fresh glasses and made friends. When the community leader went back to his people, we finished the project without further difficulty.

#### It is the river that calls me back

Pratima Singh, India

When I was a young girl, my parents used to take us children to visit our native village in Uttar Pradesh, India. Although the village had no piped water or household electricity and was 5 kilometres from the main road, I never hesitated to make this 1,700-kilometre journey.

After 40 hours in the train and another eight in a dilapidated bus we walked the 5 kilometres on unpaved roads full of heat and dust to reach our grandparents' home.

But when we reached the village, it was the river, rather than our relatives or their house, that was the source of attraction.

After a traditional Namaste greeting and the customary washing of our feet in a metal bowl by one of our relatives, we would dump our stuff in the corner and conspire to defeat the wishes of our parents and grandparents so that we could straight away run to the river. They would tell us that it was too hot to go into the water, but we would feel joyous and energetic as soon as we were halfway there. We sprinted the last 150 metres, flung our towels on the bank and jumped in to hug the river. The water made us feel cool and excited.

We could see a boatman waiting for passengers to cross the river, people washing clothes and bathing. We would sing and laugh, play games and just have one of the best times of our lives! We would only get out of the river when our stomachs began to rumble.

Now I am grown up, with preoccupations and work, and I am unable to go to my village very often. But when I go, I always make a point to go to the river. I sense there is a bit of a change in the water quantity as well as in the quality, but it still makes me feel nostalgic. I cannot resist going into the river and I still have a great time!



#### The Friendship Highway in Tibet

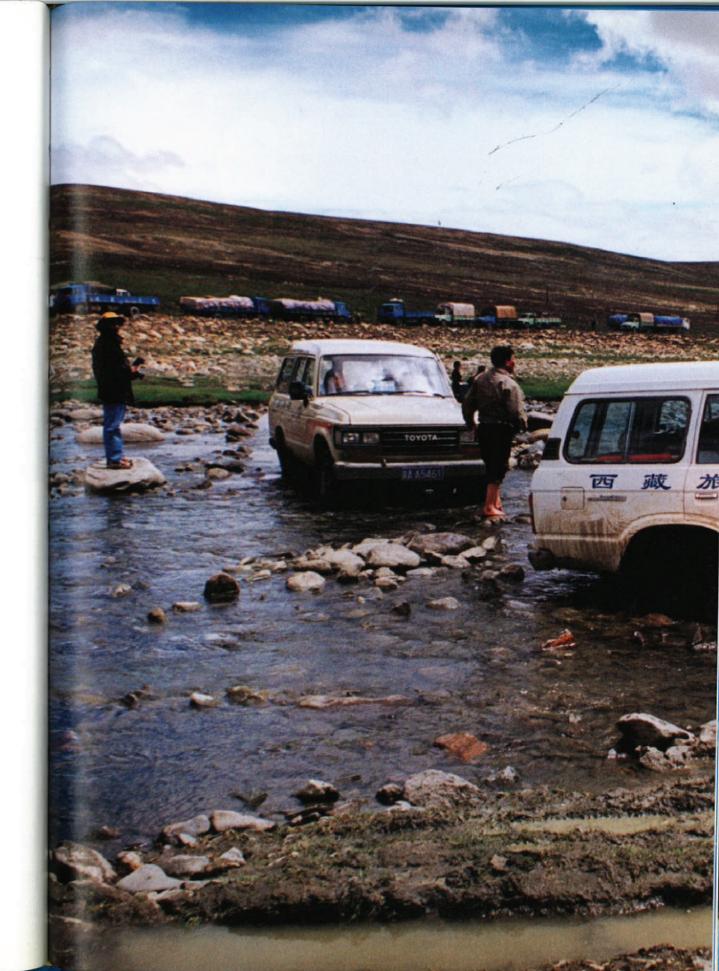
Dick Kanters, The Netherlands

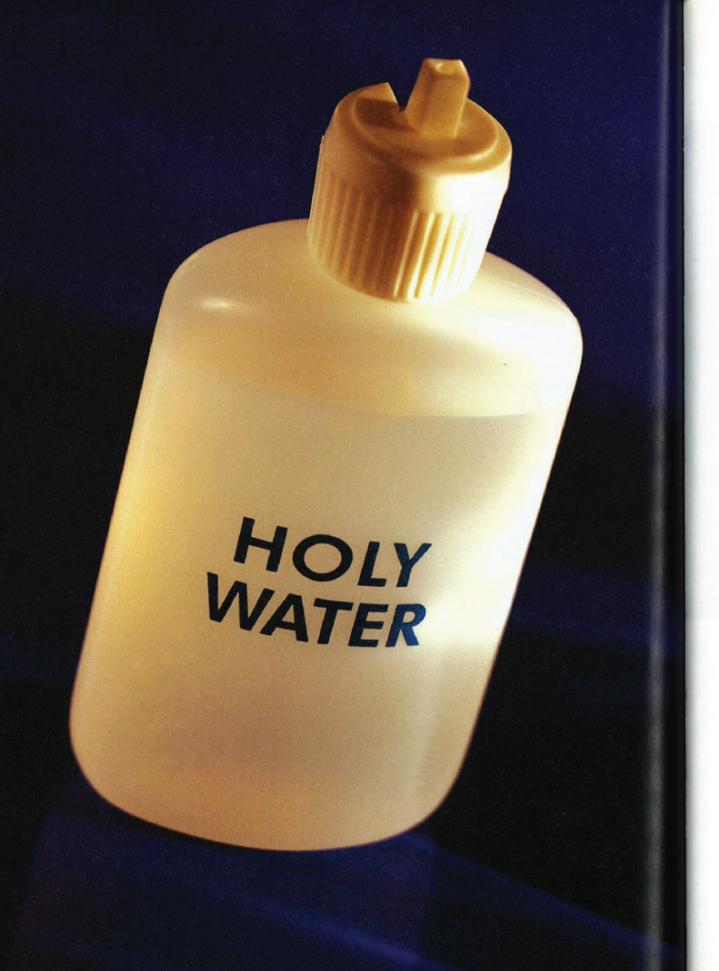
One of the most beautiful and spectacular roads in the world is the Friendship Highway. The road runs from Lhasa, the capital of Tibet, to Kathmandu in Nepal. The road winds over mountain passes of 5100 – 5200 metres high with fantastic views over the Tibetan highlands and, with a little luck, a view of Mount Everest from the town of Tigri.

The Friendship Highway isn't called that for nothing. The road is totally impassable for more than six months of the year because of the rainy season and the winter with its thick packs of snow. Landslides continuously cause the road to be blocked for days at a time.

The name 'Highway' gives the impression that the road is a well-asphalted four-lane road. The Friendship Highway, however, is nothing more than a cart track, of which the surface consists of a mixture of clay and big chunks of rock. The ditches on either side of the road are difficult to maintain, so the drainage leaves a lot to be desired.

As soon as it rains the road turns to mud, in which trucks sink up to their axles. And that also goes for the stream of cars that follows. The vehicles are sometimes stuck for days. The only option is to unload the sunken vehicles and pull them out of the mire with ropes. All the stranded passengers work side by side until the heavy job is finished. So could there be any place to make better friends than on this road, the Friendship Highway?





# The healing power of pure water

Ibe Samuel Onwuchekwa, Nigeria

Nkechi has been married for ten years but still has no child. In Igboland, where she lives, people frown at a woman with no child. She is often a victim of insults and contempt.

Nkechi and her husband Jumbo had visited the best hospitals, which assured them they are fertile. But years pass without them having a baby. Nkechi visited one of the Pentecostal Churches that perform miracles. After seven days of prayers and fasting, she was asked to get spring water for purification. Nkechi consulted me for help. I sent my driver to fetch water from my village spring. He returned with 25 litres of water. Nkechi was full of gratitude and took the water to the church.

But it turned out that the water was not spring water and could not be used. Time was running out, because the purification must take place within seven days. Nkechi returned wailing and crying. I confronted my driver (who had been well paid for his efforts) and he confessed that the water was from one of the boreholes in Umuahia. He had been too afraid to get down the 60 metre steep slope of the spring water in my village.

I accompanied Nkechi to the spring. It was a difficult journey. Nkechi was gasping for air as we descended the slope. But we got the spring water that she needed for her purification ritual. And it was not just a ritual. The water really was pure. She used the water for cooking, drinking and bathing. After a month of using this water and overcoming all the difficulties of obtaining it, she went for a test. It was positive. Nkechi was pregnant!

Millions of people are suffering or dying due to unsafe water. Unlike many untreated boreholes, this spring does provide clean water, but it is still very difficulty to reach it down the steep slope. And nobody does anything about it.

In the past, Nkechi suffered from water-borne diseases and it may have been the antibiotics she was taking that affected her ability to conceive. The pure spring water removed the need for them.

Water is life. Give us pure, safe water.



# An uphill struggle

Bunker Roy, India

The people who live near the mountains close to Kanchanjanga in India see plenty of water. It rains regularly but the water is allowed to cascade down to the rivers thousands of feet below. Then what the engineers do is to put big pumps in the valley where the rivers flow and pump the water all the way back up the mountain, costing thousands of dollars. In the mountain state of Sikkim engineers think that this costly system is the only solution.

Five years ago, the people from the Barefoot College said that they would like to try a rooftop rainwater harvesting system on the top of the mountain. The engineers and politicians thought we were crazy. They thought it was technically impossible. The Chief Minister of Sikkim shrugged and said: 'My engineers say it cannot be done, but if you build the first system that works, I promise I will come and open it.'

We managed to get some money from the central Government of India. With this we built the first rainwater harvesting system in the state of Sikkim. We did it without any help from the paper qualified engineers. The system was built by the people themselves, with their knowledge and skills, and the raw materials they collected themselves.

After we completed our work and the system was full of rainwater (160,000 litres), I went to the Chief Minister of Sikkim. 'Remember what you told me?' I asked him. 'You said you would officially come and see the rainwater system once it was completed.' The Chief Minister was quite surprised, but he also looked very pleased. 'Can I bring my chief engineer along?', he asked.

When the Chief Minister came and saw the rainwater collected he asked his chief engineer: 'Now tell me, what is wrong with this?' The engineer could not find an answer.

After this visit, the Chief Minister changed the policy of the Government of Sikkim. He immediately agreed to spend more money on constructing this kind of rainwater harvesting systems in the drought prone regions of the state. He sanctioned the development of 40 more systems like the one he had personally seen. They were to be built by the people themselves and the Government only had to provide the raw materials.

Today all 40 structures are fully operational. The total cost is only a quarter of the cost of the piped water systems built in the past by the engineers. Sikkim has decided to allocate extra money for more systems like this every year.



Dripping water can pierce a stone.

Chinese prover

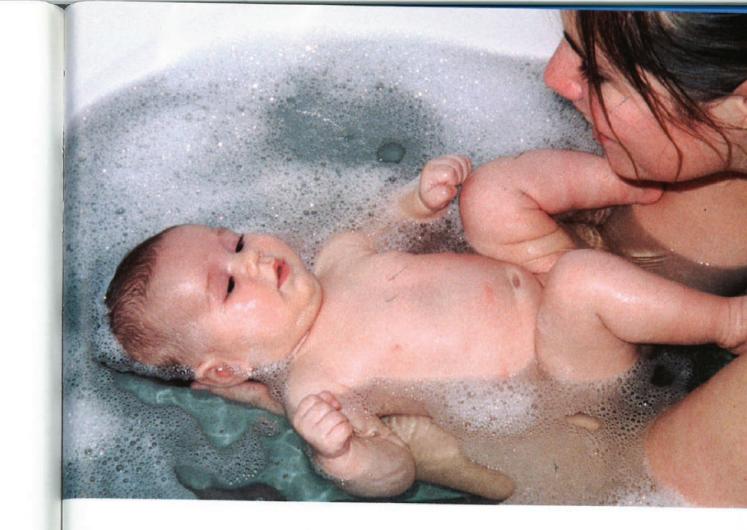
# Kinderdijk

Dick Kanters, The Netherlands

In many countries people have to fight for water. But the Netherlands have a long history of fighting against it. More than half of the country lies below sea level and because of this, the country has had its fair share of floods. The Saint Elisabeth flood of 1421 is one of the most well-known floods in Dutch history.

It is said that Kinderdijk, now placed on UNESCO's World Heritage list because of its 19 famous water mills located at the crossroads between two rivers, owes its name to the Saint Elisabeth flood. The legend says that, after the flood had reached its climax and the water flowed to the North Sea, a little crib was floating on the river. In it was a crying baby and on top of it a black cat. The cat jumped continuously from left to right to keep the crib from capsizing. The crib finally stranded on the slope of a dyke, hence the name Kinderdijk (Children's Dyke).

Even today you can find this remarkable scene depicted on a plaque at the top of a beautiful mansion located at the Oost Kinderdijk number 191.





# A great mother named Mekong

Charles Bautista, Philippines

She touches so many lives, bringing forth life. China, Vietnam and Cambodia respectfully address her as The Great Mother. And even though we think we can stand on our own, we keep going back to her for nourishment.

The great Mekong River provides the food for millions of families, caressing the land so that crops and fruit trees grow. We find ways to purify her waters to quench our thirst. She takes us places, transfers goods and attracts people from around the world to marvel at her beauty.

Mother Mekong has another side to her that people fear. At times she displays her anger and might, pouring her waters over huge tracks of land. Some people refuse to give way. They challenge her strength by surrounding their villages with walls and fortresses. Most of the time this is to no avail and Mother Mekong whips them where they least expect it. They suffer for their stubbornness. Other children know it is wise not to stay too close, building their homes beyond her stinging lashes. The wisest of her children let her anger pass through underneath their stilt houses, knowing that her mood will pass.

But mighty as she is, the Mekong is showing her own vulnerability. We have filled her waters with trash of all kinds, thinking she could cope with it all, but day by day we are poisoning her. As she chokes her life force ebbs away. We rob her of her role as a life giver.

Mekong is a complex being. But, in reality, it does not take a genius to understand her, if we take the time to watch her moods and her health. As children we have taken from this mother. Now, as we grow we must learn a give and take relationship that will protect both mother and child.

For centuries the Mekong River looked after herself, as she looked after us. Today, we must learn to look after her in return. We are all sons and daughters of the water.

# Digging in against the well

Abdulla M. Al-Thari, Yemen

Part of my job as a hydrologist in Yemen is to find suitable sights for drilling wells.

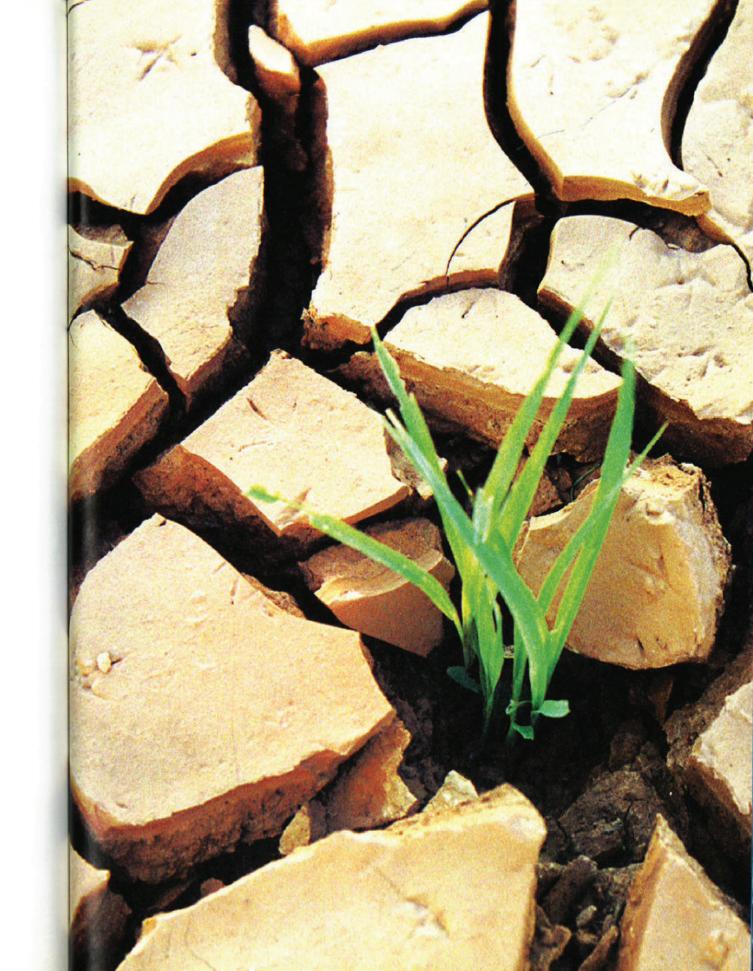
My former boss, a very influential man, gave some land to the community for a well to be drilled. The project was very successful and after three years was providing clean water for 2000 people. My boss had a very good reputation because of his gift.

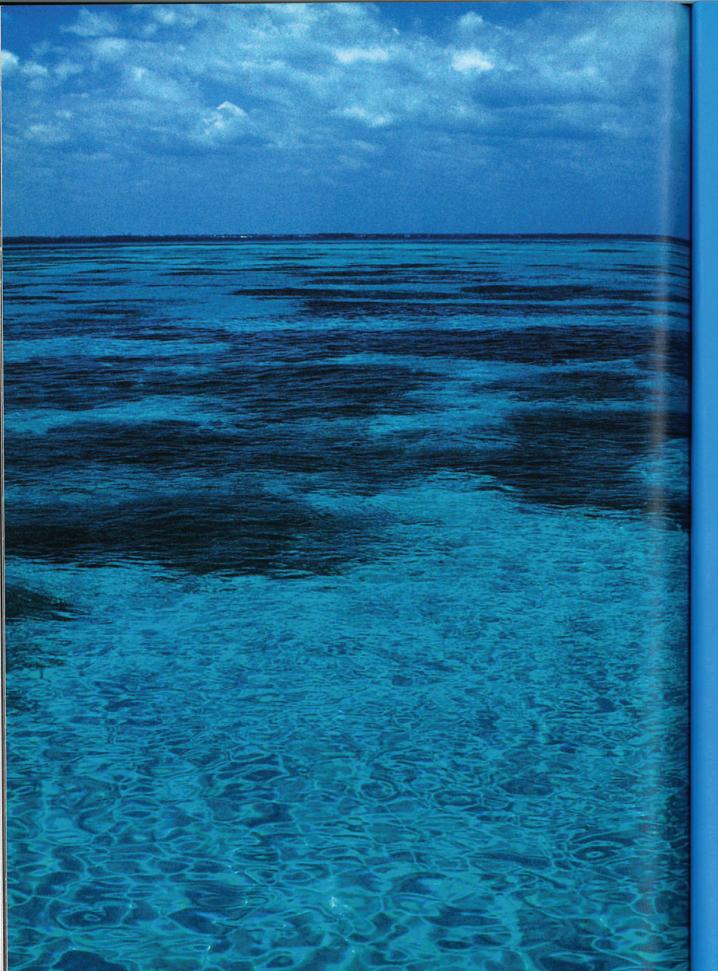
Then he told me to find another location for a well on that land. When I got there, it seemed that the location had been already decided, and my boss simply wanted me to mark the land. I felt a proper investigation should take place first, but my boss insisted. Why?

He needed a well to irrigate his own land. He had tried to drill at three different places, but none gave water. And now he wanted me to mark a spot very close to the community well. He hoped that a well very close to it would also give water.

I told him: 'If you drill a well that close to the community well, you will take water away from them.' Water is common property by law in Yemen, not something that belongs to the owner of the land. He shouted at me and we got into a fight, but I didn't give in. 'You do a good job for the community,' I said to him, 'Why do you want to spoil it now?'

For a year we had nothing to do with each other. Then we met unexpectedly. He kissed me on my forehead as it is custom in our country. 'Your decision was a good one,' he said, 'You prevented me from making a big mistake.'





# Water

Meish Goldish, United States of America, 101 Science Poems & Songs for Young Learners, Instructor Rooks

Water, water everywhere, water all around, Water in the ocean, water in the ground. Water in a river, water in a creek, Water in a faucet with a drip-drip leak! Water in a fountain, water in a lake, Water on a flower, as day begins to break. Water from a waterfall, rushing down from high, Water from a dark cloud, raining from the sky. Water boiling hot, water frozen ice, Water in a blue lagoon, clean and clear and nice. Water at a fire, gushing through a hose, Water in a garden, so every flower grows. Water for the animals swimming in the sea, Water, water everywhere for you and for me!

#### 40 cubic metres is the limit

Maher Abu-Madi, Palestine

Abadi is in his eighties. He is very worried. His water bill will be so high that he will not be able to pay. If he can't pay, he will be disconnected.

Abadi lives in the outskirts of Amman, in Jordan. His area uses a block tariff system, which means that the price of water increases when families use more water. When a household reaches a consumption of more than 40 cubic metres per quarter, the price increases hugely.

Every day the old man reads the water meter and calculates what his household has consumed. When he sees the 40-cubic metre limit approaching, he starts his emergency plan.

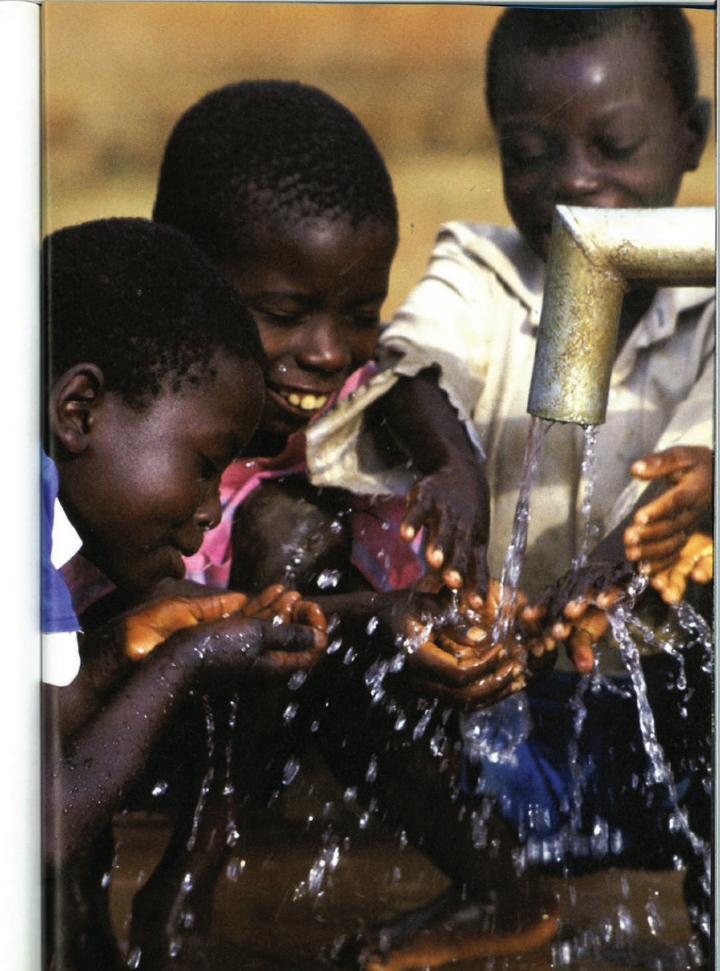
'Don't use so much water,' he constantly reminds his family, 'or we will be disconnected.'

He shouts at them when he hears the tap running in the kitchen.

He inspects all taps and connections to see if there is a leakage. He sometimes even closes the main valve so the taps in his house don't give any water. As a last resource he relies on a cistern that he uses to harvest rainwater. But rain is scarce in Jordan and the cistern is for emergencies.

Despite all of his concerns and efforts, his actions are only partly successful. Why? His household consists of more than 20 people who all need water. And that water is registered by one meter that very quickly reaches 40 cubic metres.

'Next time that you don't listen, I'll go to the water authorities and have us disconnected from the water supply,' he threatens his large family. His sons nod. They know their father would never do that.



#### A bridge too far

Peter Goedhart, The Netherlands

I look over the river, which is several kilometres wide. I cannot see the other side. But I can see islands in the river. The water flows unhindered between them. It is the dry season. I try to imagine what it looks like during the rainy season. There probably isn't much serenity then. In the dry season the islands, which they call 'chars', are inhabited, sometimes by dozens, sometimes by thousands of families. The char I am visiting is called Bara Piari, where 180 families farm more than 300 hectares of fertile land.

One of Bangladesh's most famous bridges, the Jamuna Bridge, is very near Bara Piari.

I like the bridge. Quite a feat, those engineers building it across such a wide river.

Who wouldn't be happy with that?

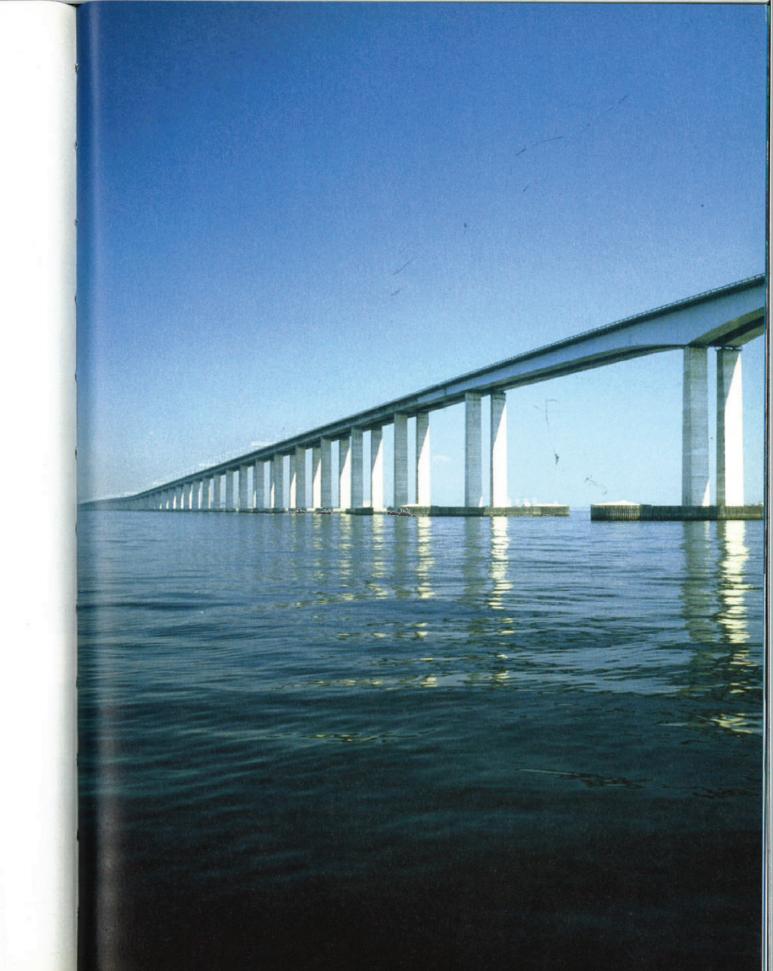
Sarutan is not happy. She looks older than her 41 years. She says that her life was better eight years ago when she inherited 0.7 hectares of land to add to her husband's 1 hectare. It was not much, but it produced enough to sustain the family. That all changed when her husband suddenly died.

'Two days later a family came and demanded the land. My husband apparently didn't have proper proof of ownership. Within a week I had lost his land. I moved to my parents' land. Just when I got my life back together, they came to the banks with their machinery and began building the bridge. The river started behaving differently. They took the river captive and all the water had to flow through a narrow passageway. Many chars were affected by the rapid water. For a while it seemed like our char would disappear entirely under water. We were forced to evacuate to the mainland.

'Our char recovered after the bridge was completed, but it was not as large as before. There were 4,000 families before the bridge. Now, only 180 remain. I didn't feel at home on the mainland, and fortunately a small piece of my parents' land was still left. I have my own hut but now I work on others' land. That's how I survive. It's a lot harder than it used to be. Of my four children, two go to school. That's all I can afford.

'We have filed a complaint against the government. We want to be compensated for the land we have lost. An organisation called JCDP is helping us and their activities are financed by a Dutch NGO, ICCO. We've already achieved our first success. The government has recognised that we have lost land and has made an amount available for compensation. But the amount is far too low.'

She becomes quiet. My thoughts, however, are elsewhere. 'The designers of the bridge could have predicted these events,' I tell her, 'They could have compensated you in advance.' 'I think that is a bridge too far for the designers,' she answers, smiling.





Some 6,000 children die every day from diseases associated with lack of access to safe drinking water, inadequate sanitation and poor hygiene equivalent to 20 jumbo jets crashing every day.

Source: WHO/UNICEF/WSSCC Global Water Supply and Sanitation Assessment 2000 Report

#### A matter of good taste

Rasheed Abiodun Ayeni, Nigeria

The Directorate of Rural Development was evaluating one of its numerous water and sanitation programmes in Lagos State in the south west of Nigeria. They discovered that one of the boreholes in a village had been abandoned.

Before the borehole was drilled, the villagers used a nearby lagoon as their primary water source. The water from the lagoon is highly laden with mud (silt and other impurities) and this was enough to convince the team that it must be replaced by a well that would provide clean water.

The water from the well met all the targets for purity, but it did not meet the villagers' targets for taste. It turned out that water from the lagoon was a vital ingredient in the soup that was used to flavour the local food. When boiled with local spices, the soup acquired a certain thickness and density that made it taste just like their mothers and grandmothers had made it.

When the villagers used the water from the borehole, the soup was too watery and tasteless. This made them think that the water from the borehole was inferior and they went back to their traditional source.

We talked about water and purity with the villagers at some education and advocacy workshops that we developed. In the end the community accepted the water from the new boreholes.

It taught us an important lesson. Putting in boreholes is not enough. People do not judge their water by the same criteria that a water engineer uses. Education and advocacy is essential to engage with community members and talk with them about their beliefs and values. It is a question of good taste!





#### We built our home around water

Ratan Budhathoki, Nepal

One year ago we moved – my wife, myself and our two children – to live near Kathmandu. We were concerned because this capital city of Nepal has more than one million inhabitants and a drinking water crisis.

We were lucky to be able to buy a piece of land close to a spring source that provides clean water throughout the year, and we built a small house there. The water supply was one of the most significant reasons for us choosing this spot. We paid \$200 to buy into the supply that we now co-own with 15 other families, and we pay \$0.40 a month towards the caretaking costs.

This water has made many things possible. We used water to prepare the cement-sand mixture, and to strengthen bricks, walls and roof slab, when we were building the house. Now we use water to cook, bathe, wash clothes and do the dishes. We need water to clean the toilet and the house.

We used to spend \$15 a month on vegetables from the market. Now my wife uses waste water to grow all kinds of vegetables in our kitchen garden. With the money we save we will be able to pay our children's school fees. There are sometimes enough vegetables left over for my wife to give some to our neighbours.

My children, aged three and five, love to work and play in the garden. They use small tools to dig in the mud and love to water the plants and the flowers.

Water is our source of food, income and joy and will always be a central part of our lives.

#### Flood life

Barbara Earth with the assistance of Boonrada Amarutanunda, Thailand

Central Thailand is one metre above sea level and relies on the Chao Phraya River to stay above water by draining into the South China Sea. In late September 2002, the full moon increased the ocean's tidal volume at the same time as the river was in full flow. The ocean was simply too full to receive any more water, and the river overflowed its banks into hundreds of villages.

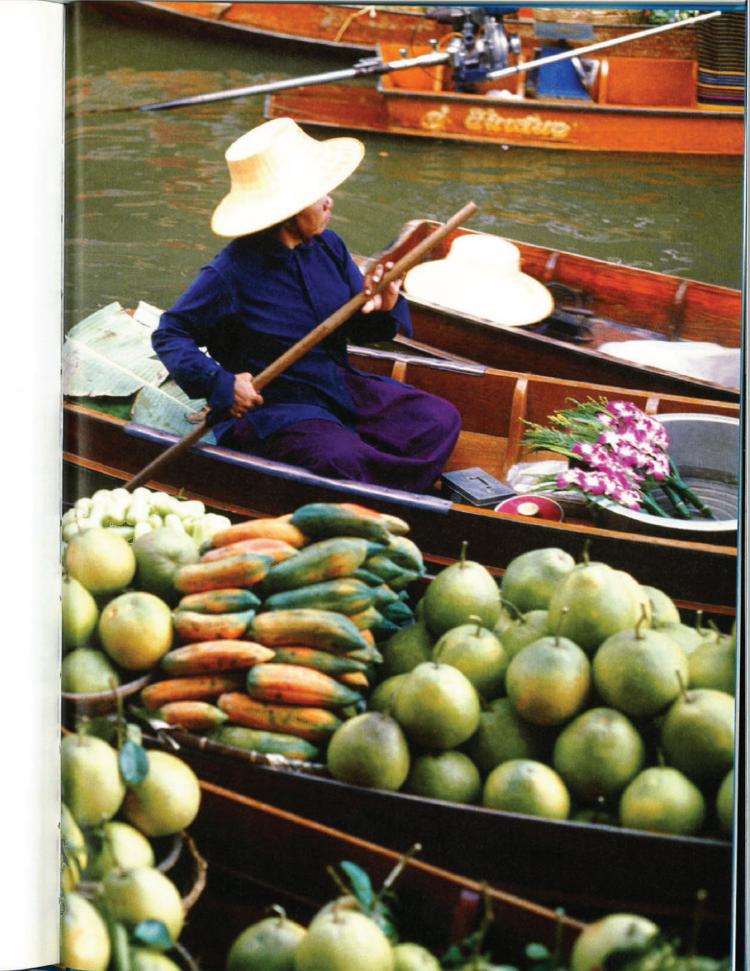
Anxiously, I drove towards Bamboo House, my weekend place in Wat Nang Village. Where the road met water, a makeshift settlement had assembled. I had to park the car and hire a boat to reach my house, floating eerily above what were usually small dirt roads.

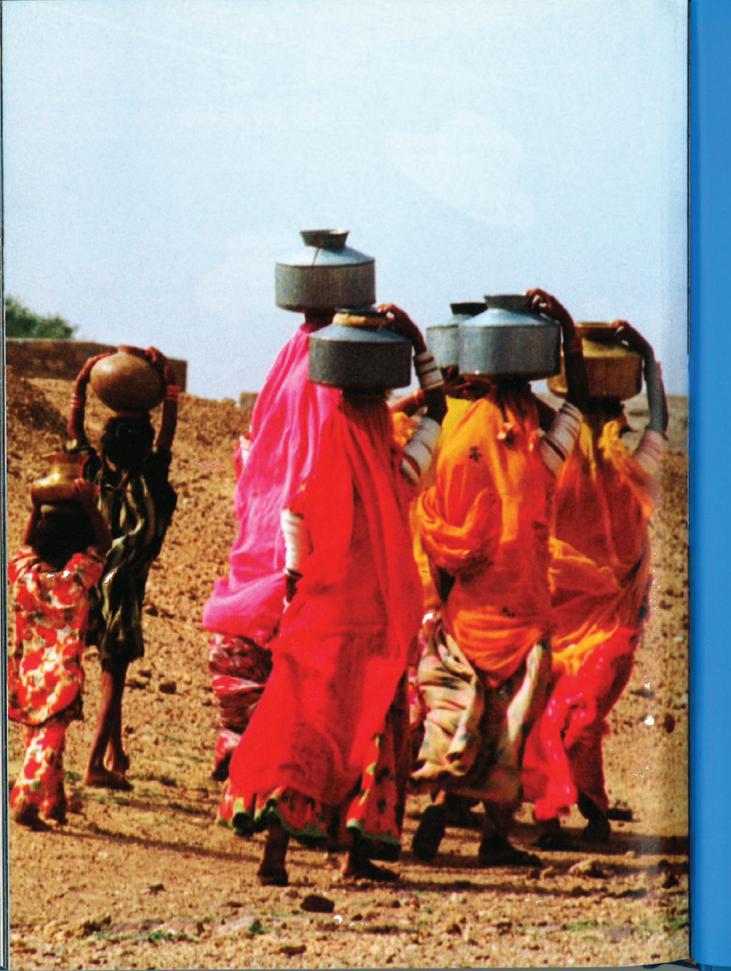
Dropped off at the garden fence, I SWam into my house, where I found that my bed was floating and the refrigerator was submerged. A neighbour had rescued my chickens, but their expressions were bewildered as they flapped about on floating objects, eyes fixed on the water in alarm. For a while I searched with my feet to locate belongings under the muddy water and left them on the floating bed to dry out. But the ripples of a snake swimming next to me hastened my retreat.

My neighbour, Wongpen Niemong, had remained in her house with her four generation family, all women. When the water rose, she and her grown-up daughter carried Pen's mother, her three-year-old granddaughter and all their possessions up to the second floor where they had to stay for over a month. Whatever was too heavy was left behind.

This was the worst flood in the 36 years since Pen moved there when she married at seventeen. A small metal boat, tied to the second floor, was their lifeline. Pen paddled her daughter to the settlement every morning so that she could go to her work, and paddled there again in the evening to pick her up. Her granddaughter had to be watched every second in case she fell into the water. Pen cooked with a gas canister, and washed the family's clothes in the river, adding alum if the water was too dirty. They bathed in the river and urinated into it, but paddled to temporary drop-toilets at the settlement for defecation. Pen managed her bedridden mother with Pampers. The only way to dispose of waste was to paddle to the middle of the river and release it.

At the makeshift settlement, villagers could receive donations of bottled water, tinned sardines, rice and instant noodles sent by concerned people in Bangkok. Men heaved and shifted sand bags to contain the river and protect the settlement. As the weeks wore on and diseases spread, a temporary clinic was set up. Eventually the river began to recede. As the water went down, people scrubbed mud off the inside and outside of their houses, cleaning all household items. Vegetation and animals that had been submerged alive were now dead and stinking, requiring more weeks of dirty work. But the flood had left a layer of fertile silt that assured abundant rice crops and, after some months, lush vegetation and fragrant flowers again lined the village paths.





The weight of water that women in Africa and Asia carry on their heads is the equivalent of your airport luggage allowance (20 kg).

Source: WaterAi

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# Acknowledgements

First and foremost I would like to thank all the people who took the effort to share their experiences with us. Many of their stories didn't end up in this book, not because they were not interesting enough, but simply because there were too many and we had to make a choice.

I would also very much like to thank the organisations who provided financial support for this book. You will find their names on page 115. A special vote of thanks goes to Egbert Fokkema, ICCO, and I also thank Ron Thiemann, WL Delft Hydraulics; Paul Roos, Fabrique; Jeroen van Eindhoven, M2D; and province Noord-Brabant.

A panel helped me in making the selection of stories that feature in the book: Margaret Catley-Carlson (United States), Sir Richard Jolly (United Kingdom), Ahmed Abo Dehman (Saudi Arabia), Gabriela Castellanos (Cuba) and Ayu Utami (Indonesia). Suzan Schapendonk from Novib helped me to find some of the authors that participated in the panel.

Fabrique took care of the design and layout. A vote of thanks also goes out to Peter McIntyre, who polished up the stories. Lingua Nostra provided the proofreading (Nicolette Wildeboer) and the translations into Spanish (Eca Zepeda) and Dutch (Nicole Rossel). Printing of the book was arranged by Meester & de Jonge.

A special thanks goes out to Dick Kanters, not only for taking the time to explain the history of Alblasserwaard and Kinderdijk in detail to me, but also for his beautiful photographs and his regular calls to ask me if he could be of further help. His enthusiasm was inspiring.

And last but not least I'd like to thank my colleagues Eveline Bolt, Susanne Boom, Dick de Jong, Corina van der Koppel, Michel van der Leest, Arlex Sanchez Torres and Jan Teun Visscher for their input.

Sascha de Graaf

