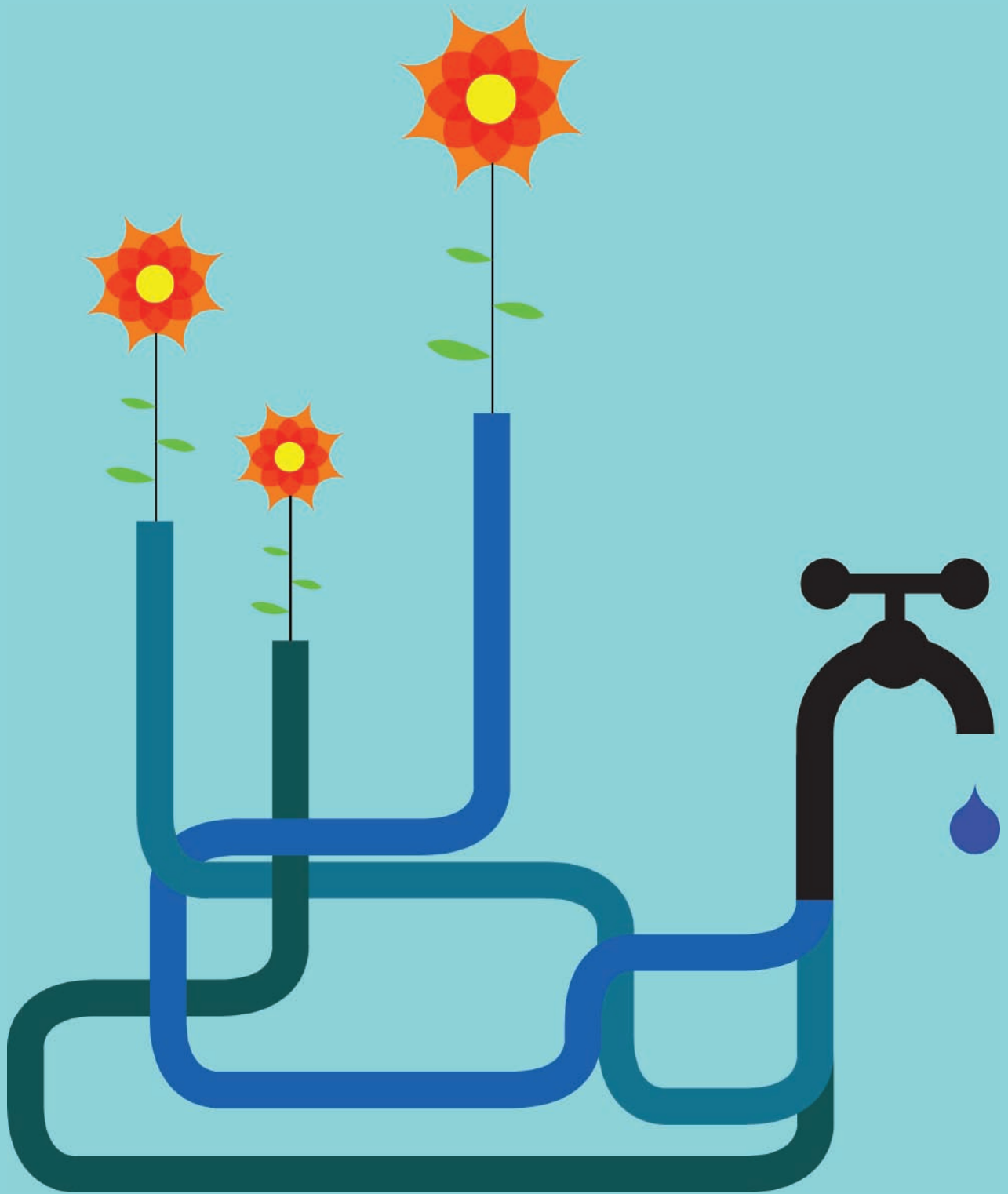


Water Rights and Wrongs

A young people's summary of the United Nations Human Development Report 2006
Beyond scarcity: Power, poverty, and the global water crisis



By **young people of the world**



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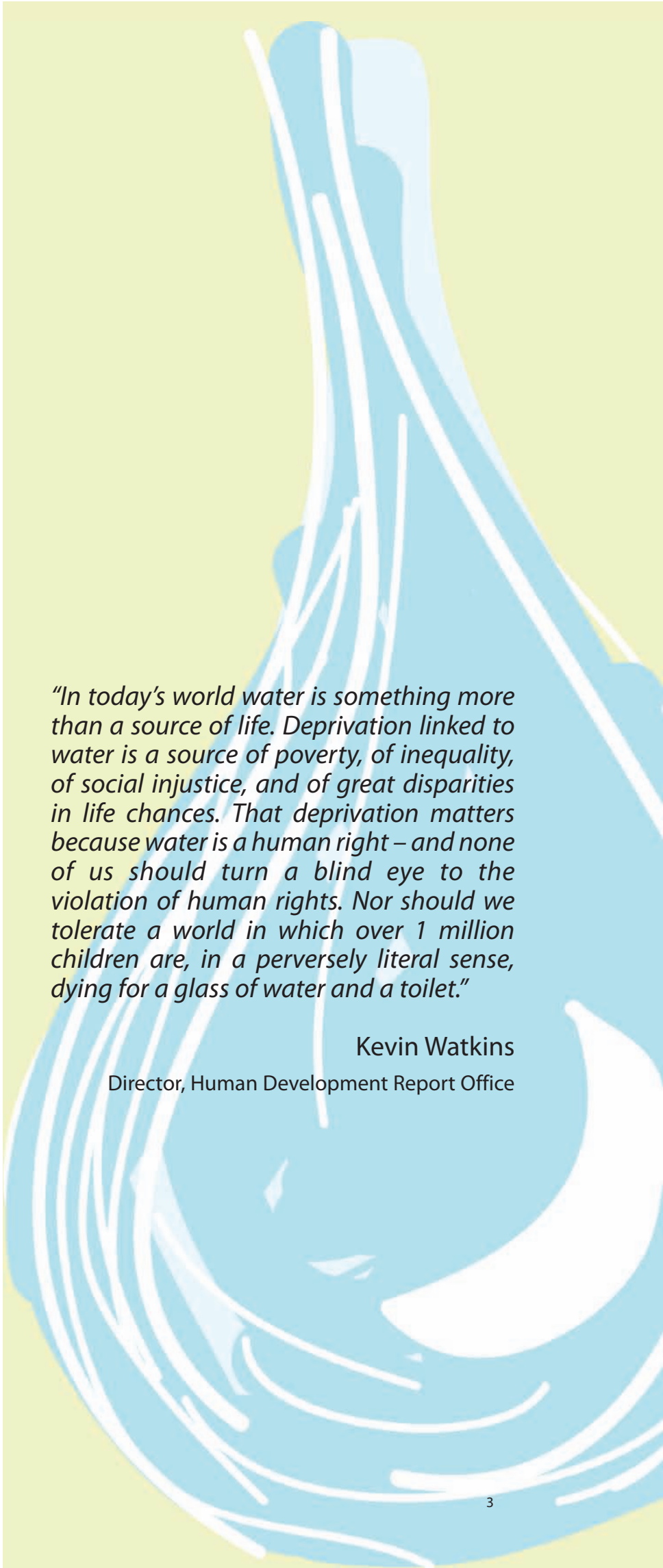


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"In today's world water is something more than a source of life. Deprivation linked to water is a source of poverty, of inequality, of social injustice, and of great disparities in life chances. That deprivation matters because water is a human right – and none of us should turn a blind eye to the violation of human rights. Nor should we tolerate a world in which over 1 million children are, in a perversely literal sense, dying for a glass of water and a toilet."

Kevin Watkins

Director, Human Development Report Office

UNDP Foreword

Start building the foundations

Water is one of the essentials of life, and a key foundation for human development. But, as you will read, for large sections of humanity, this foundation is not in place.

Some people believe that the current water crisis is occurring because there just isn't enough water for everyone. The United Nations Development Programme (UNDP) rejects this view, arguing that the roots of the crisis can be traced to poverty and inequality. With one billion denied their basic right to safe drinking water, the world's poorest are paying the highest price in this crisis. Lack of water creates cycles of poverty which lead to more inequalities between men and women and boys and girls, more child ill-health, and more disease and death. Two million lives could be saved by making water the top political priority. But it is not: water strategies do not win elections, and toilets are not core issues in any democratic elections. As a result, the international community has failed to make water a priority. And, the poor still lack the political voice or muscle to assert their claim to water as a human right.

However, this booklet is very far from a council of despair. Our research suggests that the world already has the finance, technology and capacity to consign the water crisis to history, just as surely as today's rich countries did a century ago. What are missing are well-designed, properly financed plans of action.

To repeat: we do not see an absolute shortage of supply – the world is not running out of water. But millions of the world's most vulnerable people do live in areas of mounting water

stress. More needs to be done to address threats posed by climate change. Competition for water will increase in the decades ahead as populations grow, and industrialization and the needs of agriculture drive up demand for it. Around 1.4 billion people live in river basins where water use exceeds recharge rates. Rivers are drying up, underground aquifers are failing and water-based ecosystems are degrading fast. The world is running down one of its most precious resources while, at the same time, running up an ecological debt that will burden you – the younger generation – with an increasingly difficult problem.

If the necessary corrective actions are not taken, two things could happen. First, the weakest could see their right to clean water eroded by more powerful groups of people. Second, cross-border conflicts could intensify and break out into open warfare if they are not checked by public policies and international cooperation. The 2006 Human Development Report was designed to stimulate debate amongst policy-makers on these crucial issues. I hope that this Youth Summary of the Report will stimulate a similar and creative debate amongst the rising generation who will, if the current inertia on water policy persists, have to face a water crisis that dwarfs that faced by today's leaders.



Kemal Derviş

Administrator, United Nations Development Programme



Youth Foreword

You have to work today to save the world tomorrow

"...they put it in a plastic bag and throw it in the street? That's unbelievable!" A chorus of incredulity rises from the six young people around the table.

"No! I tell you, it's true!" A voice cuts across the disbelief. "What else can people do? There are no pipes. There are no toilets. Where else do you go?" Relaxing in to her seat as her point sinks in, Patricia surveys the faces the room. "Really, we have no idea how lucky we are."

Condensing the 2006 Human Development Report into 32 youth-focused pages takes a lot of brainstorming, research, writing, and story telling. It's the second evening of the editorial meeting and young writers, artists, and editors from around the world are discussing the finer points of the water and sanitation crisis. The particulars of "flying toilets" in Kibera, Kenya launch the editors into an excited discussion of the various merits of well-digging, latrine-building, and drip irrigation.

The Human Development Report (HDR) is one of the best-known and widely read United Nations publications. The 2006 report tackles one of the most challenging and most ignored issues facing the global human family: the availability of clean water and adequate sanitation. Ensuring safe water and sanitation worldwide would save the lives of 1.8 million children each year, and would grant dignity to the 2.6 billion people who live without sanitation.

The HDR is a fascinating document, full of facts, figures, and first-hand accounts from the front lines of the water and

sanitation crisis all around the world. It is also 400 pages long and delves into complex and convoluted government policy issues, so it's not exactly a must-read for the youth of today. This is why the UNDP invited the young people of Peace Child International's world network to create an illustrated summary of the report specifically targeted at youth.

Around the table, the discussion has turned to submissions. There are over 500. Neat stacks of essays, poems, drawings and photographs are strewn across the table in minutes. A hum of page-flipping and excited murmurs settles over the room as the young editors read and share what the world's youth think about water scarcity. The result is the magazine you are reading now...

Andrea Connor
Anika Patricia
Daniel Ben
Blaine



Millennium Development Goals

Target 2015

In 2000, world leaders at the UN Millennium Summit created a series of goals to overcome extreme poverty and extend human freedom. The Millennium Development Goals (MDGs) are founded upon democratic governance, rule of law, respect for human rights, and peace and security; they must be met by 2015. The goals can be achieved if all the actors work together. Poor countries must govern well and support their people by investing in health care and education. Rich countries must embrace foreign aid, debt relief and fairer trade.

8 Challenges to change the world



Eradicate Extreme
Poverty and Hunger



Achieve Universal
Primary Education



Promote Gender Equality
and Empower Women



Reduce
Child Mortality



Improve
Maternal Health



Combat HIV/AIDS,
Malaria and Other
Diseases



Ensure Environmental
Sustainability



Develop a Global
Partnership for
Development

The question is not if we can afford to achieve the Millennium Development Goal target...

The MDGs are rooted in a simple idea: extreme poverty and gross disparities of opportunity are not inescapable features of the world, but are problems that can be fixed. If we succeed, we will have made a massive leap forward in human development. If we fail to achieve the MDGs, our collective security and prosperity will diminish. The twin issues of clean water and adequate sanitation affect a huge number of other issues. So, we must make sustained progress in both areas to achieve every single MDG.

7 Ensure Environmental Sustainability and halve the number of people without sustainable access to **safe drinking water** and **basic sanitation** by 2015.

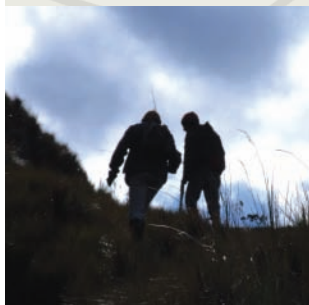
At least **900 million people** need access to water and **1.3 billion** need access to sanitation by 2015.

The expected reduction in diarrhoea alone would result in a gain of **272 million days of school attendance** mostly in sub-Saharan Africa and South Asia.

Reducing diarrhoea would gain **3.2 billion working days** for people aged 15-59.

Reaching the water and sanitation target would **save about 1.7 billion US dollars per year**, by cutting the amount spent treating water-borne infectious disease.

Achieving universal access to water and sanitation by 2015, would **prevent 2 million people's deaths** over the next decade.



Daniel Lopez



Nina Best



Olivier Cournoyer Boutin



Shahrez Khan



Julien Paquin

...It is whether it can afford NOT to make the investment.

Human Development

Freedom to realize our potential

Human development is about what people can do and what they can become. It is also about the freedom they have to exercise real choices in their lives. Water security is an integral part of human development. Water security ensures that every person has reliable access to enough safe water at an affordable price, to lead a healthy, dignified and productive life.

Aiming For A Better World

Human development and human security are about much more than economic growth. Human development lays the groundwork for a better world: a world without poverty, where education and good health can be enjoyed by all.

Universal access to even the most basic water and sanitation facilities would save health systems in developing countries about 1.6 billion US dollars each year.

Clean water and sanitation are closely tied to human development. The second biggest killer of children

worldwide is the combination of dirty water and lack of sanitation. They kill 4900 children each day. Universal access to even the most basic water and sanitation facilities would save health systems in developing countries about 1.6 billion US dollars each year. When children walk long distances to fetch water or when they get sick because they drink unclean water, they miss school and seriously harm their education. Poor education and health cripple their ability to work, and they sink into a vicious cycle of nearly inescapable poverty.

Fortunately, huge improvements are possible. The Human Development Report's Global Plan calculates that we need 10 billion US dollars annually to meet the Millennium Development Goals and drastically improve access to clean water and sanitation all over the world. Although 10 billion dollars may seem a lot, the governments of the world spend that amount on military hardware every eight days! Imagine the implications if we used a tiny percentage of military spending to provide sanitation and clean water for all.

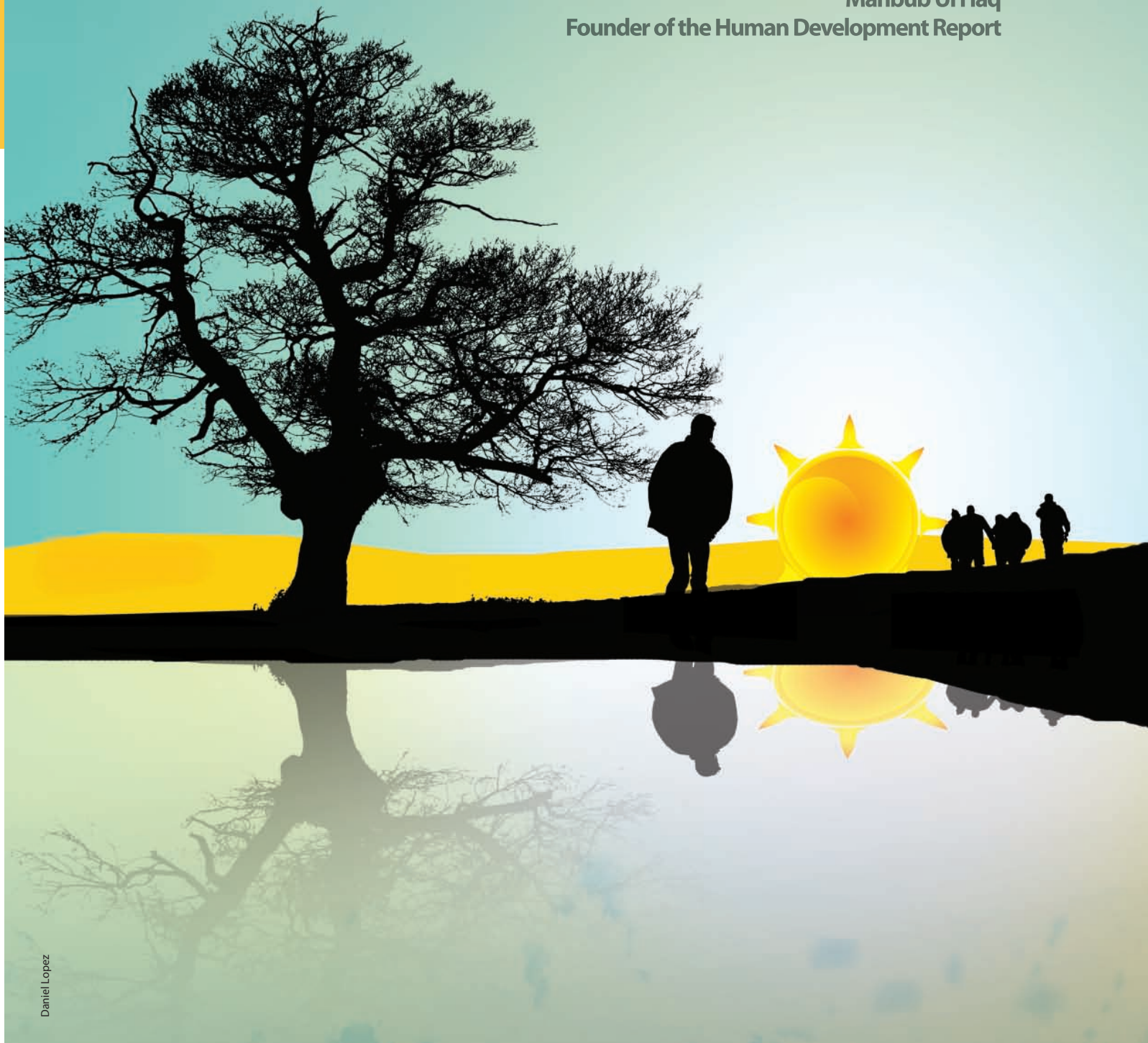
Consider this too: in rural West Bengal, India, huge advances in sanitation, health, and community development have been achieved at incredibly low cost.

With a small loan, community members constructed latrines in more than six villages. The money – 30 US dollars per latrine – was loaned for one year without interest and helped the villagers both build the latrines and start family businesses. Before the latrines were built, villagers relieved themselves in open fields: a situation lacking hygiene, safety, and privacy.

Local solutions to local problems are the starting point for change.

“Human development is concerned with human dignity: a child who does not die, a disease that does not spread, an ethnic tension that does not explode, a human spirit that is not crushed.”

Mahbub Ul Haq
Founder of the Human Development Report



Daniel Lopez

Water gives life to everything, including human development and human freedom.

Water: A Human Right

Prerequisite for peace

Human rights protect all people from political, legal and social abuses. We have rights based on natural human dignity, regardless of ethnicity, nationality or sex.

According to the Universal Declaration of Human Rights, *"The recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world."*

20 Litres Every Day... The Bare Minimum

"Access to safe water is a fundamental human need and, therefore, a basic human right. Contaminated water jeopardizes both the physical and social health of all people. It is an affront to human dignity."

Kofi Annan,
UN Secretary-General

On World Water Day 2001 the UN Secretary-General challenged the world to solve the water crisis, and the UNDP responded: world governments must make 20 litres of fresh, clean water every day a universal human right – as 20 litres is the minimum a person needs to live. Our lack of progress is obvious. In many countries masses of people still have access to less than 20 litres, or drink dirty water containing faeces, pesticides or other poisons. Also, where safe sources do exist, they are only available to those who can pay. To fill a container can cost between US \$0.25 and \$1.25, so for the 660 million people who live on only \$2 a day, buying water is simply not possible.

If water is not recognized as a human right, these situations will continue indefinitely. The time to make water a human right is now, and this will not be achieved without total global commitment. If everyone's rights to water and sanitation were respected, a ripple effect of health and development would spread around the world.

Denied My Right to Clean Water

In my home of Mushin, a suburb in Lagos, Nigeria, there is rarely water in the taps. My family and I have to purchase water from water collectors. Every day we spend about 150 Naira (US \$1) to fill an 80-litre container. People living in the mainly poor neighbourhoods are not as lucky. Instead of being in school, many poverty stricken children spend hours each day collecting water for their families. I've watched kids taking water from leaking pipes and gutters.

The local government is only paying lip service to this demeaning situation: they construct boreholes (deep, narrow holes in the ground where we sometimes can find water), but they stop working after two or three weeks. I have been hospitalized twice because I drank water from a borehole. I need water to live, but all I get is tainted water. I have a right to clean water and I am denied it. Why?

We, as youth, need to create awareness about the importance of clean water and sanitation. We must change our mindsets, attitudes and habits to be proactive. Together we must work to see that water is recognized as a human right and that funding is increased to make water clean and safe, not only for ourselves, but for all future generations.

Francis Anyaegbu, Nigeria

Human rights are not optional extras.



Samadhee Malalasekera

Cans of Silver

Every morning
yawning
she suffers
desiring mouthwash
with fluoride wafers.
With great caution
she tips
the cracked plastic bucket
like
a can full of silver.

Or
turning aside.
In silence
surrounded by chores
needing water
in abundance.
Parched spirit, dry hopes
Desperate mother
tracing
water for broth.
Cost leaves
unwashed dishes, skin.
Can you just look on
and swim in a world of silver?

Charles Sendegeya, Uganda



**Governments must
ensure every person
has access to at least
20 litres of clean
water each day.**

**We must recognize
water and sanitation
are basic human
rights.**

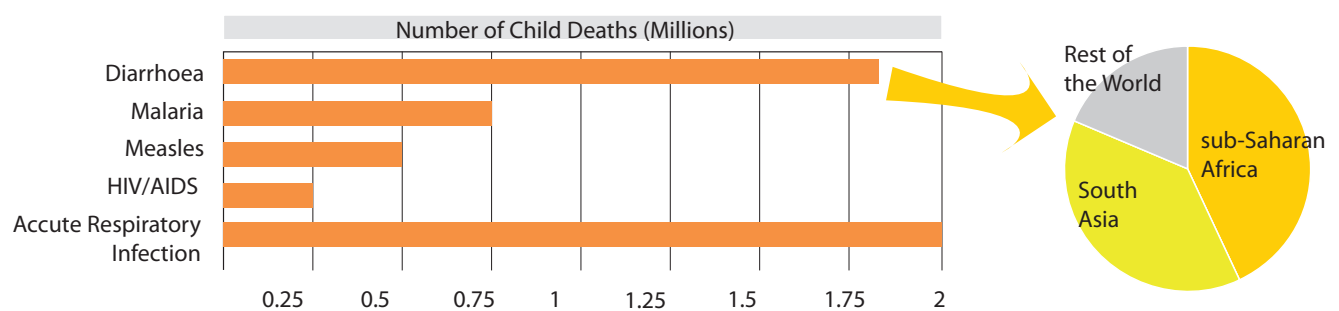
**Water and Sanitation
are not only essential
for human life, they
are building blocks
for development.**

Human rights: binding obligations reflecting universal values.

The Silent Crisis

A silent emergency - people are dying in millions

Water-borne disease: a quiet assassin



5 billion cases of diarrhoea are diagnosed in children each year in developing countries. It kills 1.8 million of them.

Globally, **diarrhoea caused by bacteria and viruses in polluted water** kills more people than HIV/AIDS or malaria.

In the absence of functioning drainage systems, water forms stagnant puddles that are soon infested with malaria-carrying mosquitoes. **3600 people die of malaria each day** – 3200 of them are children.



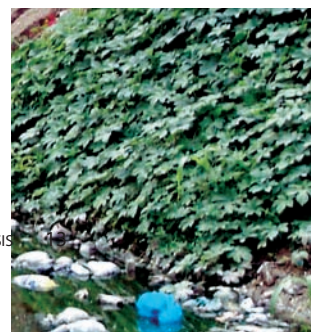
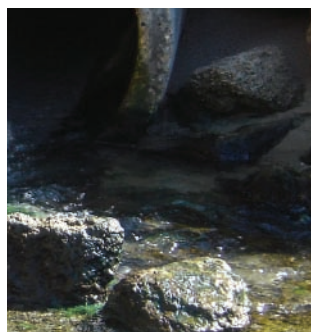
Bart Abbott

Raw sewage mixed with drinking water is a recipe for **cholera**.

Daniel Lopez



Yu Xian



Silent

2.6 billion people have no sanitation

958 million people in
East Asia and the Pacific

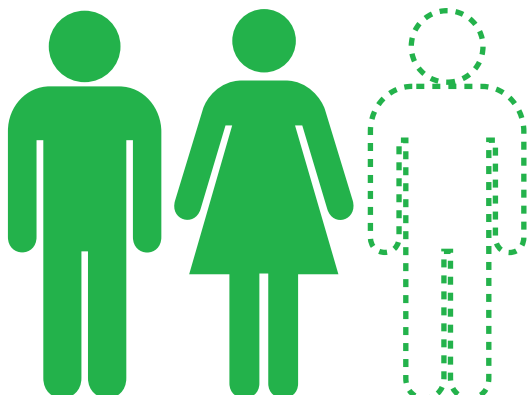
925 million people in
South Asia

437 million people in
sub-Saharan Africa

80 million people in
the Middle East

120 million people in Latin
America and the Caribbean

In Cambodia the daily wage for rural labourers does not even cover a family's basic nutritional needs. **It would take 20 days' wages to buy a simple pit latrine** – impossible when that money is needed for a family's food, clothing and housing.

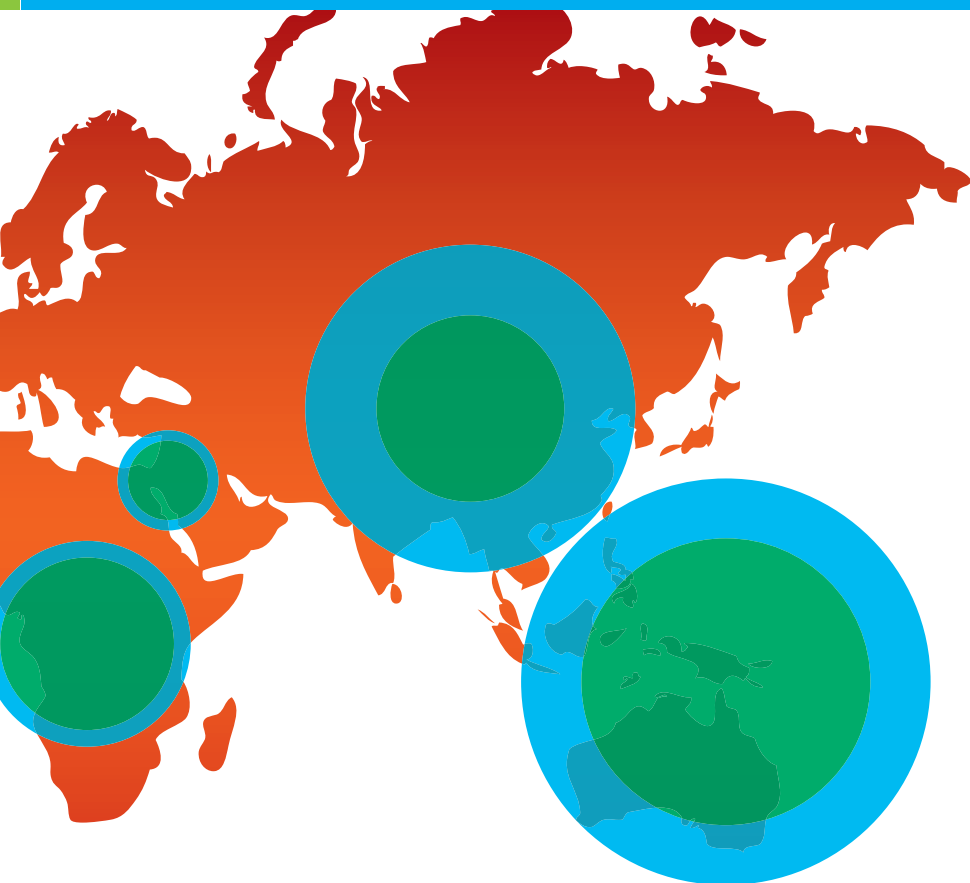


2.6 billion people, almost half the total population of developing countries, don't have adequate sanitation. That is 1/3 of the entire population of the world.

Infant mortality can be halved with clean water.

Crisis

1.1 billion people have no clean water

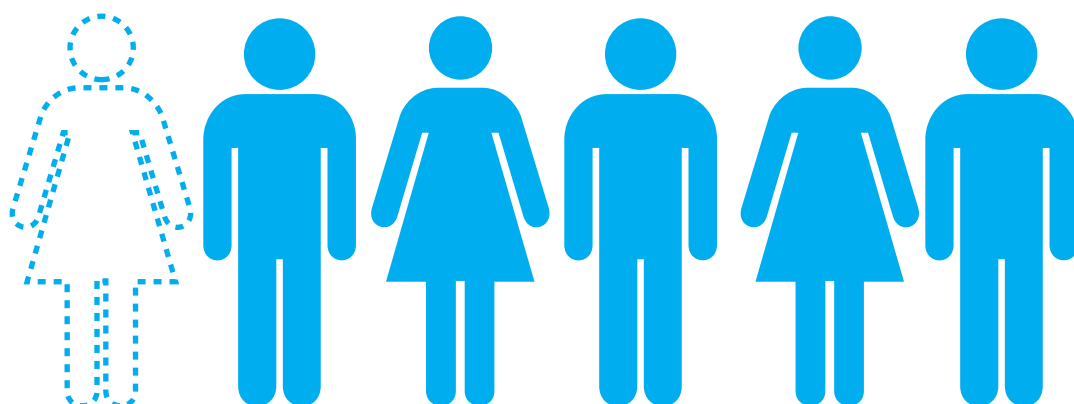


- 406 million people in East Asia and the Pacific
- 229 million people in South Asia
- 314 million people in sub-Saharan Africa
- 38 million people in the Middle East
- 49 million people in Latin America and the Caribbean

In the developing world 1 in 5 people are without safe water.

1/6 of the world's population lacks access to clean water.

660 million people live on less than US \$2 a day, without access to a clean water source. Some **385 million of them live in absolute poverty on less than US \$1 a day.**



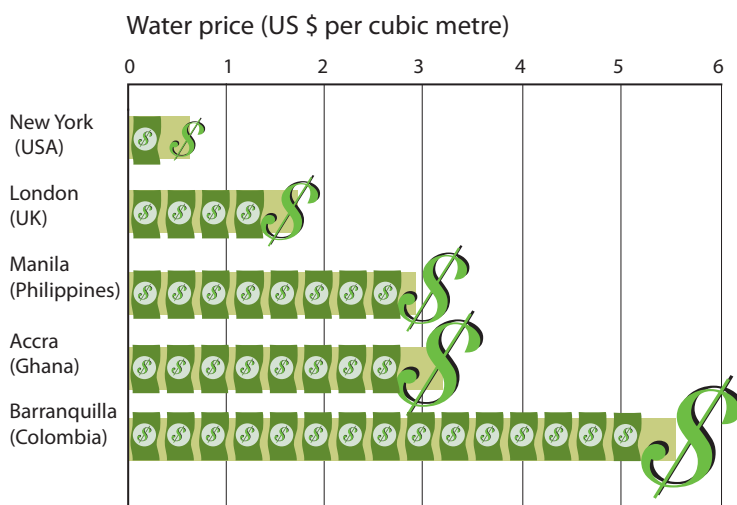
700 million people live in water stressed countries, by 2025, 3 billion will.

Dealing With Inequality

Water costs nothing for those with everything and everything for those with nothing

The poor pay huge sums for small amounts of water. To get it, they walk great distances, wait hours, and compete with other equally desperate people for the precious resource. Overcoming inequality is more than making sure that all people receive 20 litres of water everyday – those 20 litres must be clean and affordable – and free for the poor.

Who pays the most?



If you live in a slum in Manila, you pay more for your water than people living in London.

From the Tap or the Bottle...

Living in a big city in Russia for my entire life, I was used to buying bottled mineral water. It never occurred to me to drink from the tap because anyone who did got very sick. Every morning when I brushed my teeth, I used mineral water. When we ran out of bottles, I used special filters and boiled the water. This took forever. Sometimes I went to school without brushing my teeth.

Now I'm an exchange student in the United States. Can you imagine my surprise when I saw my host parents drinking tap water? But they still buy mineral water. I don't know why.

Olya Chebykina, Russia

Water inequality: a system of apartheid based on wealth and location.



Karmel Wong

Frozen Pipe Conscience

Today winter arrived in Canada and the water pipes in our barn froze. At 6:00 am my brother Eric and I started lugging 20-litre buckets of water from the house to the barn so the animals had something to drink. Underneath my layered clothes I was still cold: today was truly a day of the North.

As I waited for my buckets to fill, I thought how funny it was that I was doing something long ago abandoned by humans. And I corrected myself: *there are still plenty of people in the world who carry their water daily*. Buckets filled, I trudged up to the barn. The first trip was invigorating. I was outside, I was exercising, and I was on a mission: get water to the animals. Inside, a thirsty cow and a llama, polite enough to not complain about their lack of water greeted me – the sheep and goats however, let me know their present situation was entirely my fault. Heading back to the house, I realized that my arms were quite sore. It was going to be a very long morning.

Back at the house I started thinking again. *How similar I am to the people of the world who carry their water daily*. Again I shuffled my thoughts: *No – my cows are pets. My life does not depend on the survival of the cows. And the survival of my cows rarely depends on me lugging water to them. Normally all I do is turn on the hose*. The buckets filled and my thoughts halted. I rushed the last fifty meters to the cows' water bin and dumped the buckets immediately. I told the cows how lucky they were and went back to the house for another load.

I am used to doing rough farm work, but walking through snow carrying 40-litres of water required muscles I don't use on a daily basis. Walking together, Eric said we should do this every day and build up the sore unused arm muscles into strong ones. *Everyday, just like so many people around the world.*

Normally, all I do is turn on the hose...

I imagined what it would be like – all this work, everyday, just for every sip of water. As we passed the cows, I noticed their water bin was a bit dirty and would need to be cleaned soon. *The water that I get out of my tap is clean and clear and ready for drinking. But what if it came from a muddy river, or a stagnant pond? What if the only water I had access to was dirty? I looked back at the horses, the cows – my pets – and watched them ease their thirst with clean water. Water far cleaner than that which millions of people drink. Why should I be entitled to this wealth and luxury? Why should I be water-fat, and others thirsty? Why do so many people need to worry where their next drink of water will come from? What can I do?*

Connor Youngerman, Canada

385 million people live on less than 1 US dollar a day and have no access to safe water.

Gender Bias

The burden on women and girls

Worldwide, women and girls bear far more than their fair share of the costs of the water and sanitation crisis. In many places, culture dictates that women and girls take care of the household; so it is their responsibility to find and fetch water for their families. For girls, the lack of clean water and sanitation facilities close to home turns into lost opportunities to go to school, learn marketable skills, and fully participate in their communities.

Lost Time, Lost Futures

It's a pretty simple problem: when women and girls have to collect and carry water, or walk long distances to find somewhere to go to the bathroom, they lose time that could be spent on other things. Like going to school. Or playing with their children. Or working.

The links are clear. "Of course I wish I were in school," explains Yeni, a ten year old in El Alto, Bolivia. "But how can I? My mother needs me to get water, and the standpipe here is only open from 10-12. You have to get in line early because so many people come here."

The closer girls live to a water source, the more often they attend school. In Tanzania, when girls live within 15 minutes from a water source, their school attendance is 12 per cent higher.

Fetching water isn't the only barrier for female education; for

those lucky enough to get to school, inadequate or non-existent bathroom facilities often send them right home again. Many parents, concerned about the lack of hygiene, safety and privacy in school latrines, withdraw their daughters once they reach puberty. In Bangladesh, after a UNICEF program improved school sanitation facilities, the number of girls attending school rose by 11 per cent.

When women and girls have access to clean water and sanitation, the benefits are long lasting. Educated women are better able to take part in decision making in their households, communities and countries. Educated girls tend to marry and have children later, and their families are smaller and healthier than those of uneducated mothers. It's clear that if we make water and sanitation provision a priority in the developing world, we will make great progress towards meeting the third Millennium Development Goal: "promote gender equality and empower women."

Many parents, concerned about the lack of hygiene, safety and privacy in school latrines, withdraw their daughters once they reach puberty.

40 billion hours each year are spent collecting water in sub-Saharan Africa equal to a year's labour for the entire workforce of France.



Antonio Suarez

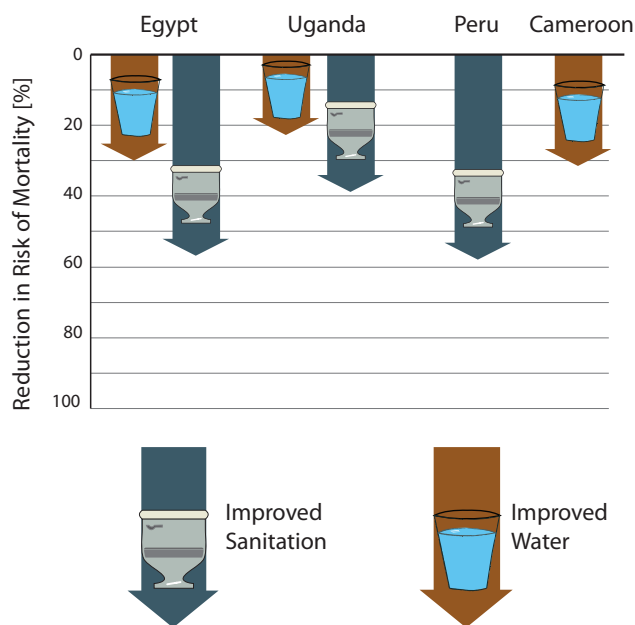
Studies suggest that a woman only had to carry water for one hour a day, she could earn an additional US \$100 each year.

Benefits of Action

A 300 year timewarp: Mumbai, 2007 = London, 1707

There is hope! History has shown that when large cities, like London and New York, set up comprehensive sanitation systems, their populations became healthier as water borne diseases, like cholera, disappeared. Unburdened by disease, citizens began to live longer, more productive lives, and over time were able to make leaps forward in human development. Our challenge is to replicate those leaps where the provision of water and sanitation is still lacking.

A little bit helps a lot



UNDP research shows that improved water and sanitation can cut child deaths on a large scale.

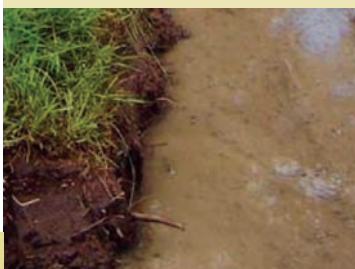
Investing in water and sanitation could go a long way to accomplishing **Millenium Development Goal Number 4**: "reduce child mortality."

When one sewer truck started working in Orangi, Pakistan, the infant mortality rate sank from 130 deaths in 1000 births in the early 1980s to fewer than 40 per 1000 births today.

National, regional, and local governments must take the lead by making water, sanitation and public health priorities.



Bart Abbott



Bart Abbott

Water Brings A New Lease on Life

In Moturumesi village and the surrounding areas in Nyamira, Kenya, there had long been a water crisis, but in 2004 the villagers got support from the government and donor agencies. Today water from the new municipal well and pipe system serves more than 15 000 people and 30 000 animals. There are happy faces all around. "Our animals are healthy and I am sure of going to school early," says Susan Kwamboka, a frequent cholera patient before the water project.

For me, the biggest treat is I can go visit my grandmother, who lives in Moturumesi. The reforms make everything simpler for me when I visit her because I don't have to fear fetching clean water from long distances, taking animals to far-away rivers. My grandmother no longer has to take her children and grandchildren to the hospital. She also waters her crops regularly, ensuring a bountiful harvest. The sudden availability of water has given her a new face. She enjoys showering everyday – something she has not done for years. To her, life has just begun.

Joshua Awala, Kenya

Because of Ghana's Community Water and Sanitation Agency, 200 000 more people a year gain access to clean, fresh water!

Costs of Inaction

Human lives are the price of indifference

The water crisis threatens all humanity. Infants die from cholera; people drink contaminated water and women walk for miles a day, only to reach tainted water sources. Our inaction will destroy us. If we continue to drag our feet, we will condemn billions more to poverty, disease and death. Water is not a commodity – it is a necessity for life.

Sick In The Toes

For years the owners of the apartment complexes across the road have been draining their sewage and human refuse into the playground of Ezra Gumbe, a primary school in East Africa. Francisca Howalla is the Head Teacher of Ezra Gumbe. She stands in the driest part of the playground and uses her finger to trace the streams of disease-ridden water as they flow across the road in small hand-dug trenches. "This swamp formed right in the middle of the playground and it makes the children sick," she says. "We treat about 30 children a week for diarrhoea or malaria."

All across the world children are dying from improper sanitation. John Mark, Marcos, and Babu are students at Ezra Gumbe. They are about ten years old and, like all children, they love to play. "Some water at our school is not clean," John Mark says. "When we are running over the field here, sometimes our legs are sick in the toes." Both John Mark and Marcos bend over and point to their feet. The illness they speak of is most likely Bilharzia. Bilharzia is caused by parasitic worms that infest water contaminated by urine or

faeces. The worms enter through the feet and cause a rash and pain – which John Mark, Marcos and Babu all say they have experienced. Without quick medical attention, Bilharzia can damage the liver, intestines, bladder, and lungs, and eventually lead to death.

The United Nations Convention on the Rights of the Child specifically states that children have an "inalienable right to engage in play and recreational activities." Not only are the young people of Ezra Gumbe being robbed of their health, they are being robbed of their ability to be children. They cannot play. They cannot run, enjoy themselves or be happy without risking a fatal illness. Could anyone be happy under these conditions? Still, when John Mark, Marcos and Babu were asked to make a funny face for the camera, they were absolutely delighted. This is the beauty of the child spirit. It is one of the purest and most powerful forces for peace and happiness, and this is why it must be protected and nurtured.

Bart Abbott, USA

Diarrhoea kills 1 child every 3 minutes.

In most of the developing world, unclean water is a greater threat to human lives than violent conflict.

Right now almost half the population of the developing world suffer from diseases because of dirty water and inadequate sanitation.



Water Crossing Borders

International cooperation is vital for everyone's wellbeing

When many different countries depend on one water source, cooperation does not just make sense, it is crucial for human survival. Though access to water can be a great dividing force, it can also be a great unifier. Unfortunately, countries that border the same water reserve often do not cooperate and end up fighting over the resource. Governments need to radically change their perspectives and learn to share.

Curbing the Abuse

In the plateau between Peru and Bolivia, lies Lake Titicaca. But the lake is dying. We are dependent on the lake, but we have abused it, allowing waste and runoff from mining and farming into the ecosystem. Almost a million people live around the lake, but they are unaware of the damage that they have caused. They warn us not to drink the water or eat the fish anymore – and fish is my favourite food!

In the past fifteen years the Bolivian and Peruvian governments have established organizations to curb the abuse. These groups cooperate and work to educate local people about the impacts of their farming. Plans exist to improve waste-disposal facilities, but we face major challenges. Now there are too many people to sustain the traditional ways of farming. The waste from one farm does not cause much damage, but the waste from thousands does. As I walk along the shore by my house it makes me sick to see all the pollution.

Before we can clean up the lake we must clean up our lives. We need better waste management and health services. We need sustainable farming techniques. Lake Titicaca is a tremendous resource, but without care we could destroy it. Thanks to the cooperation between the Peruvian and Bolivian governments, we might not be too late. We can still save the lake. Hopefully I will be able to eat fish again someday!

Gaby Mavila, Peru

Co-operation for Rejuvenation

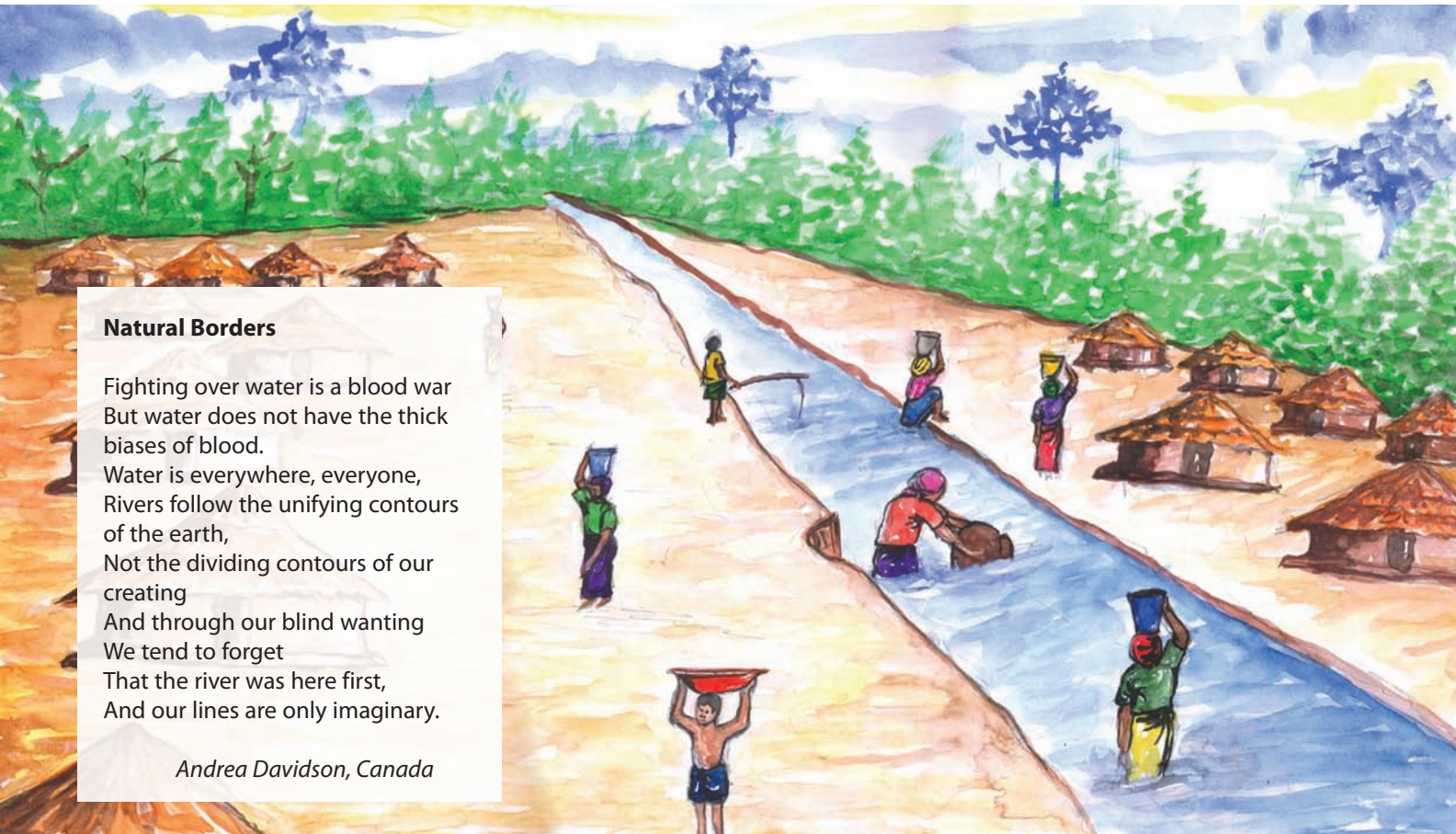
The Danube River runs through a basin spanning 19 countries in Europe – including Germany, my home. For a long time, managing the river was difficult because so many different countries all use it all the time, but in 1998 a commission of representatives from all the bordering countries was formed to work together to protect the river and the surrounding areas.

The major objective was (and still is) to restore the river, bringing it back its former glory, and in doing so, provide a clean and healthy water system for Europe. Since 2001, billions of dollars have been invested in cleaning up the river, its estuaries and surrounding areas – I organized a clean up of an estuary near my house. The results of this work are incredibly positive, and are already becoming apparent: the number of different species living in the river has almost doubled since the 1980s, the water is clearer, and people around the river are happier and healthier. My mum used to tell us not to go swimming in the river during the summer, but now we can!

Although the work has taken significant economic and political investment, the benefits from these improvements reach everyone. Together they proved that nations can come together and solve a mutual problem – an example of what could happen in other regions where conflicts exist over shared water systems. From the Danube, we draw both water and hope.

Matthias Schmidt, Germany

9 countries share the Amazon. 11 countries share the Nile.



Samson Gounue

Natural Borders

Fighting over water is a blood war
But water does not have the thick
biases of blood.
Water is everywhere, everyone,
Rivers follow the unifying contours
of the earth,
Not the dividing contours of our
creating
And through our blind wanting
We tend to forget
That the river was here first,
And our lines are only imaginary.

Andrea Davidson, Canada

Dam Conflict

Where I live in India, fighting for access to shared water resources is common. Thanks to the government and legal system these disputes are often settled civilly, but because judgements are difficult to pronounce and often take years to resolve, crises are inevitable.

In 1991 my home state of Tamil Nadu experienced a devastating drought when the river Cauvery, which provides all the water for our state and the neighbouring state of Karnataka, went dry. The Cauvery first flows through Karnataka before it reaches Tamil Nadu. There is a dam between our two states that allows a specific amount water from the Cauvery to pass through to the farmers of Tamil Nadu, while retaining a certain amount for the farmers of Karnataka.

Because of this drought, water that should have come to Tamil Nadu, never reached our farmers, and left them without enough water to irrigate their fields. I was only five

years old, but I still remember how angry my father was. I had never seen him like that. For sixteen years the courts and legislature have been unsuccessful in finding an amicable settlement for this crisis, which resurfaces every summer, and for sixteen years people from Tamil Nadu and Karnataka have resorted to violence to protect their claim to the Cauvery's precious water.

Thankfully on February 5th, 2007, India's Supreme Court finally reached a legal solution that will hopefully resolve the crisis. The verdict established nationally imposed quotas for the amount of water each state receives, and ensures that those quotas are met during the harsh, dry summer months. The government's plan is a reasonable compromise, and thanks to this national legal intervention, the farmers in my home of Tamil Nadu and the farmers in Karnataka will have enough water each summer. Hopefully now the violence and the quarrelling will stop.

Preetam Alex, India



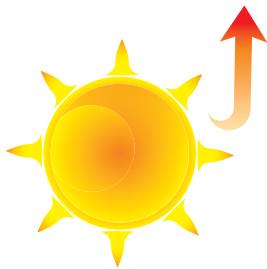
Darpan Mandal

2 out of 5 people live in water basins shared by multiple countries.

Climate Change

Slowly unfolding and inevitable

Greenhouse gasses are making the world warmer and warmer. Our immediate global priority must be to create strategies to ease the threats to human development. The effects of climate change – rising sea levels, droughts and deluges, and erratic temperatures, will affect the health, security and livelihoods of millions of people worldwide.



Higher temperature



Increased evaporation from oceans



More intense changes in the water cycle creating new water patterns



More extreme weather, floods and droughts

The Warming World

No matter what we do now, in the next one hundred years the world will change dramatically as a result of the greenhouse gasses (mostly carbon dioxide, methane and ozone) that we have already pumped into our atmosphere.

Higher air temperatures will increase evaporation from the oceans and will speed evaporation of water from land. Rainfall patterns will change – dry areas will get drier and wet areas will get wetter. Climate change will also bring more extreme weather events, like recent hurricanes.

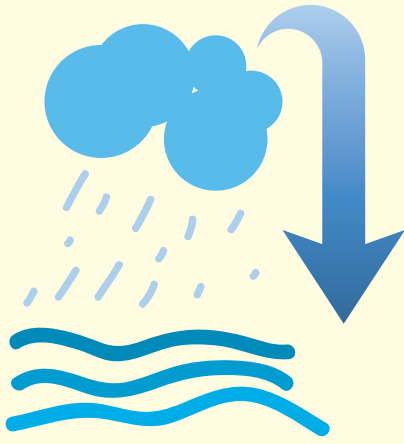
The 1997 Kyoto Protocol was the most concrete step towards mitigating climate change. Governments promised to reduce carbon dioxide emissions by 5 per cent of their levels in 1990 by 2012. But neither Australia nor the United States have signed up, and the Protocol does not apply to developing

countries like China or India. In reality Kyoto covers less than a third of global emissions.

Real progress requires an unprecedented level of international cooperation. Rich countries have to do more to “decarbonize” their economies; but, at the same time, the deepening “environmental footprints” of developing countries cannot be ignored.

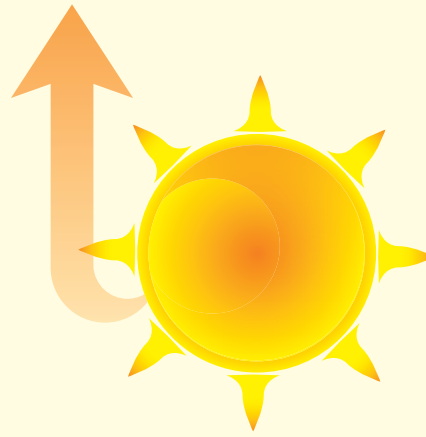
Kyoto Protocol signatories promised to reduce carbon dioxide emissions by 5% of 1990 levels by 2012.

Drought could increase the number of malnourished people by 75-125 million.



In West Africa river discharge has fallen by more than 40% since the 1970's.

In the 1990s about 201 million people a year were affected by climate related disasters.



The 10 warmest years on record have occurred since 1994.

The 1990s was the hottest decade since the 14th century.

The globe will warm 0.2°C to 0.5°C every decade in coming years.



Edward Blackie

Water Water Everywhere...

In January 2006, the Waghi River in the western highlands of Papua New Guinea flooded. After months of drought my family had been praying for rain. We needed water for the vegetable gardens where we grow our food and for the coffee plantation we work on. When the rains came they didn't stop. The river overflowed its banks and washed away everything in the flat valley bottom. Everyone in the village fled into the hills, but our homes, our gardens, our animals, the plantation... Everything was under water.

We thought the worst was over when the water receded, but we were wrong. Everything was covered in a thick layer of mud and sand and debris. The bodies of drowned animals began to decay and we got sick from malaria because the puddles and ponds were ideal breeding places for mosquitoes. It took four months of cleaning and repairing before my family could move back home.

The bitter irony of the flooding was that even though we had prayed for rain and the water came, we were dying of thirst. After the flood there was no access to safe water for drinking or washing because the usual streams that we took water from were destroyed or polluted with dead animals. We had to rely on bottled water! Even a year later things still haven't returned to normal.

Norman Wai, Papua New Guinea

If all emissions stopped today, temperatures would still rise due to past emissions.

Youth Action

Our passion fuels our will

Zest. Persistence. Passion. Commitment. Courage. Vision. Positive Attitude. These define the spirit of youth activism. Young people have proven over and over that they are great teachers and creative thinkers. The following are examples of young people making revolutionary changes in their communities, helping to end the silent threat of water-borne disease, and fighting for their right to clean and safe water.

Little Steps

"At home I re-used tap water to flush the toilet," says **Lin Yan** from China. "The next month, my mum was surprised to see the water bill drop by 20 per cent! Seeing the state of affairs around me, I decided to start the 'How to Save Water at Home' campaign. I printed flyers and I now have a good team of people who have joined hands with me. Every year on World Water Day we organise awareness events in our community. Though a little step, we at least know that we are moving in the right direction and ensuring the population, especially the poor, gain access to enough water for less money."



Nina Best

Refugees Toilet Miracle

After the civil war in Sierra Leone, refugee camps were overflowing. Mandela Camp, one of the biggest, had only 7 toilets serving 1000 people! These toilets were totally unclean: the waste flowed right down a ditch past **John Koroma's** front door. Concerned about the health risks he and others faced, John decided take action! With the support of his friends, family and community members, John applied for (and received) funding to renovate the toilets. The team devised a plan to rebuild the toilets, installing cisterns and bowls, connecting them to an 80 metre plastic pipe that carried the sewage to the main sewer on the street. For only US\$1045, John made a huge difference.



Anika Singh

"Filthy water cannot be washed." African proverb



Daniel Lopez



Dan Porges/Still Pictures

Solar Powered School Days

Vu Thuy Anh was incensed to learn that village children in her native Viet Nam could not go to school during the dry season because they had to walk 30 km each day to fetch water. Vu and an engineer designed a system to draw water from the nearest spring 12 km away. The solar-powered system uses a pump to move water from the spring through a pipeline and into a holding tank in the village. In two days Vu, her friends, and 60 villagers dug the trench for the pipe. By the end of the week, the holding tank was full. The project engineer, Nguyen Xuan An, trained local youth to oil the moving parts of the pump and monitor it regularly. The kids, accompanied by many young helpers, eagerly check it daily. They come to view the pump that has saved them so much and allowed them to attend school again.

I can make one promise
and one wish. I promise that
I will never be careless towards
water from now on, and
I wish that every single person
on this planet would follow
my lead.

Raffia Saleem, Pakistan

"You ain't gonna miss your water until your well runs dry." Bob Marley

Visions of the Future

What we need do to reverse the crisis...

Make 20 litres of clean fresh water for each person, everyday, a recognized and upheld human right.

Ensure that no household spends more than 3 per cent of its income on water.

Ensure that the poor get water for free.

Governments must make clean water and sanitation a national priority, and provide funding for development projects.

Governments and community groups must work together to devise locally appropriate solutions to water and sanitation problems.

International aid donors must fund sanitation and water projects.



Further Youth Action

Be the Change!

As youth, we are in a unique position: we have energy, time and enthusiasm. Now is the time for action. Get involved!

Educate yourself about the water and sanitation crisis.

Start with word of mouth.

Tell friends, classmates, your parents.

Re-use the water from washing vegetables to water plants or clean.

Turn off the tap while brushing your teeth.

Change water taps at home to economy taps.

Send letters, and postcards, and emails, and carrier pigeons to your government.

Tell them that you expect progress and sustainable investment in water and sanitation projects.

Volunteer with an organization that works on water and sanitation issues!

Many organizations supply small grants for youth-led development projects. Write a proposal and a budget. Just \$300 to \$500 can go a long way in developing countries.

If your community needs a well or latrines, get some friends together, look for funding, and start digging!

If you live in a water-rich area, start a club to raise money to fund projects in places that are in need.

Be creative.

The options are limitless...



You can live for 40 days without food
but just 5 days without water



Darpan Mandal

Water is a Human Right

– At least 20 litres a day –