

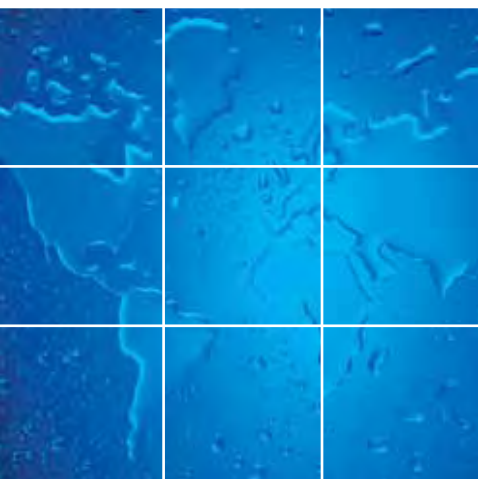


Water

Version 2



Introduction



The WBCSD's Water Project aims to enhance awareness in the business community of critical water issues while actively promoting mutual understanding between business and non-business stakeholders. Engaging leading companies representing a broad spectrum of activity, the current program is focused on the role of business in sustainable water management and on strengthening the foundation for effective business action.

Everyone understands that water is essential to life. But many are only just now beginning to grasp how essential it is to everything in life – food, energy, transportation, nature, leisure, identity, culture, social norms, education, gender equality and virtually all the products used on a daily basis. In particular, water, energy and climate change need to be tackled together, and these are linked to agriculture too. Therefore, this paper is only a piece of the puzzle and should not be viewed in isolation from other sustainability concerns.

Since 2004, the WBCSD has consolidated its position as the leading business voice on water in major policy events. The project has produced a set of tools intended to help companies integrate water issues in their strategic planning. These tools include *Water Scenarios to 2025* (2006) and the *Global Water Tool* (2007). From the start, WBCSD water publications have documented successful experiences in water management within and outside a company's fenceline. A prime example of this is *Collaborative Actions for Sustainable Water Management* (2005).

This working document provides an overview of some basic facts and societal challenges related to water. It has been developed by the WBCSD secretariat and is intended to support the ongoing dialogue within the WBCSD membership and with other stakeholders in civil society and government. The emphasis in this document is on water availability and people's use of water for agricultural, industrial and domestic purposes. It aims to be a helpful complement to the rest of the projects' activities that seek to get water higher on everyone's business agenda by providing frameworks and tools to support water management plans, as well as sharing best practice across sectors.

We have used existing data from many United Nations organizations, documents prepared for the World Water Forums, the OECD, the World Resources Institute and other research organizations. We present it here in a simplified and condensed format to promote understanding of the world water situation and to stimulate forward thinking on business as part of the solution to issues in water and sanitation.

Project Director James Griffiths
Project Manager Eva Zabey
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Disclaimer

This brochure is released in the name of the WBCSD. It has been developed by the WBCSD secretariat and is intended to support dialogue within the WBCSD membership and with other stakeholders in civil society and government on the role of business in sustainable water management. It does not necessarily represent the views of all WBCSD member companies.

Other WBCSD publications on water:

Water, Energy and Climate Change – a contribution from the business community (2009)
Sanitation – It's time for business to act (2008)
Sustain Magazine – "H2O" (2008)
Global Water Tool (2007)
Business in the World of Water: WBCSD Water Scenarios to 2025 (2006)
Collaborative Actions for Sustainable Water Management (2005)
Water for the Poor (2002)
Partnerships in Practice: Industry, fresh water and sustainable development (2000)
Industry, Fresh Water and Sustainable Development (1998)

Ordering publications

WBCSD, c/o Earthprint Limited
Tel: +44 1438 748 111
Fax: +44 1438 748 844
wbcscd@earthprint.com

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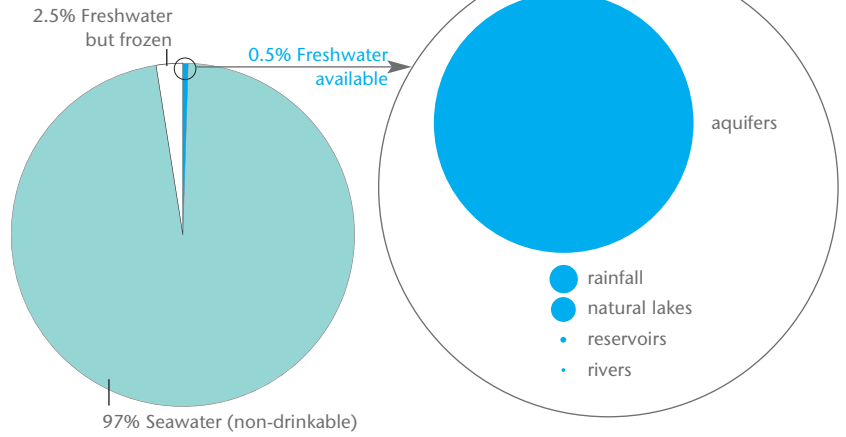
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Where is freshwater found?

The global situation

- Less than 3% of the world's water is fresh – the rest is seawater and undrinkable.
- Of this 3% over 2.5% is frozen, locked up in Antarctica the Arctic and glaciers, and not available to man.
- Thus humanity must rely on this 0.5% for all of man's and ecosystem's freshwater needs.

Freshwater available



Where is this 0.5 % of freshwater?^{1,2}

How many Olympic-sized swimming pools is that?

- 10,000,000 km³ stored in underground **aquifers**. *Since 1950 there has been a rapid expansion of groundwater exploitation providing:*
 - 50% of all drinking water
 - 40% of industrial water
 - 20% of irrigation water.³

4,000,000,000,000
- 119,000 km³ net of **rainfall falling on land** after accounting for evaporation.

47,600,000,000
- 91,000 km³ in **natural lakes**.

36,400,000,000
- Over 5,000 km³ in **man-made storage facilities – reservoirs**. *There has been a 7-fold increase in global storage capacity since 1950.*

2,000,000,000
- 2,120 km³ in **rivers** – constantly replaced from rainfall and melting snow and ice.

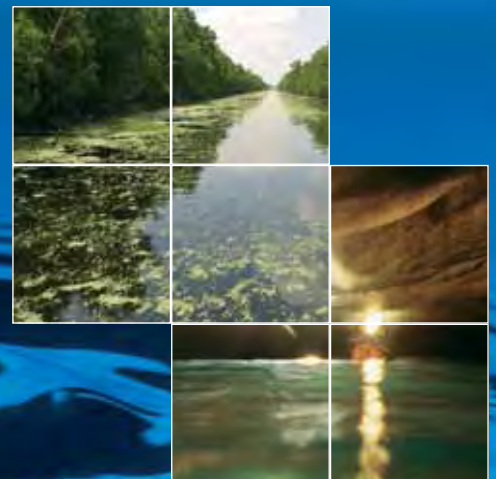
848,000,000

The world is not “running out of water,” but it is not always available when and where people need it. Climate, normal seasonal variations, droughts and floods can all contribute to local extreme conditions.

Ref. 1: “Water for People, Water for Life” United Nations World Water Development Report, Part II: A look at the world's freshwater resources. UNESCO, 2003, www.unesco.org

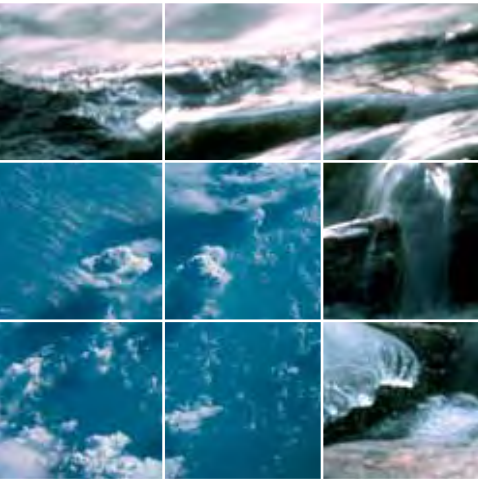
Ref. 2: “The Storage and Aging of Continental Runoff in Large Reservoir Systems of the World” Vörösmarty, C. J., et al. *Ambio*, Vol. 26 n°4, June 1997, pp. 210-219.

Ref. 3: “Groundwater – the processes and global significance of aquifer degradation” Foster and Chilton, Royal Society of London, 2003.



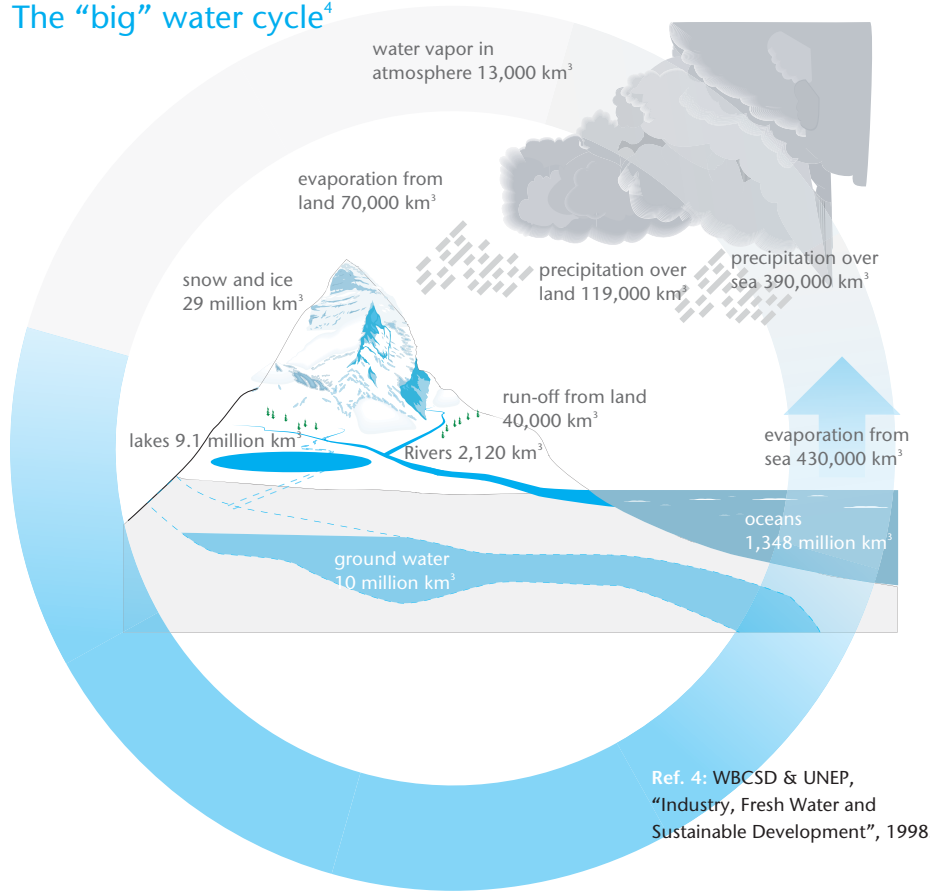
N.B.: 1 cubic kilometer (km³) = 1,000,000,000 cubic meters (m³) = 1,000,000,000,000 liters = 264,000,000,000 U.S. gallons
 1 m³ weighs 1 ton
 1 Olympic-sized swimming pool = 50 m X 25 m X 2 m = 2,500 m³ (estimate)

How is freshwater distributed?

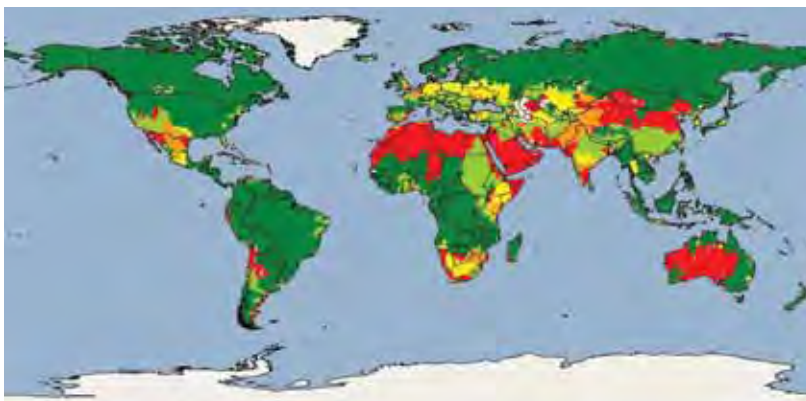


Water is not distributed evenly over the globe. Fewer than 10 countries possess 60% of the world's available freshwater supply: Brazil, Russia, China, Canada, Indonesia, U.S., India, Columbia and the Democratic Republic of Congo. However, local variations within countries can be highly significant.

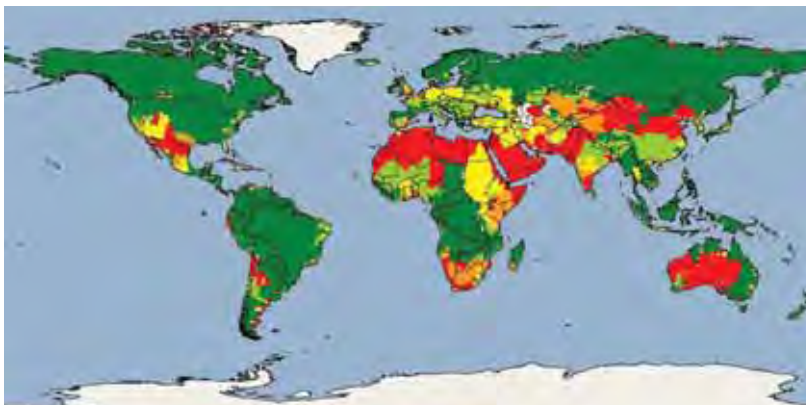
The "big" water cycle⁴



1995:



2025:



Annual renewable water supply per person by basin⁵

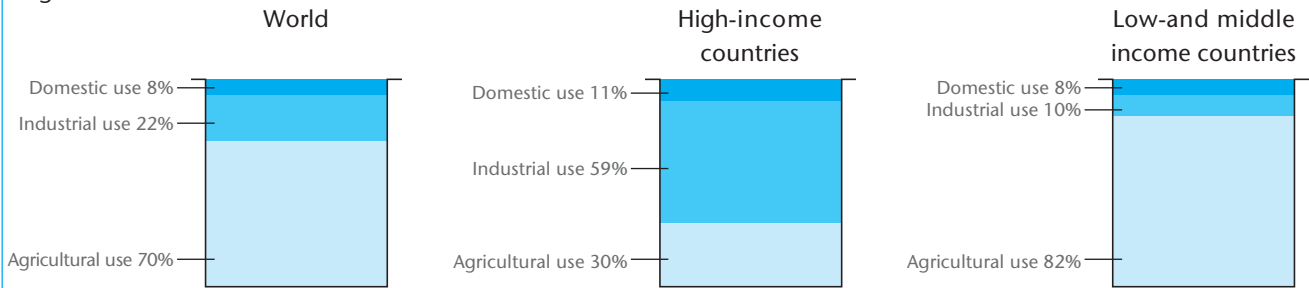
(m³/person/year)

- Extreme scarcity < 500
- Scarcity 500 - 1000
- Stress 1000 - 1700
- Sufficient 1700 - 4000
- Abundant > 4000
- No data

Ref. 5: World Resources Institute, IUCN, IWMI, Ramsar, "Watersheds of the World: Global Maps", Water Resources eAtlas, 2003. pdf.wri.org/watersheds_2003/gm15.pdf

Competing water uses for main income groups of countries⁶

Industrial use of water increases with country income, going from 10% for low- and middle- income countries to 59% for high-income countries.



Ref. 6: UNESCO, "Water for People, Water for Life", United Nations World Water Development Report, 2003.

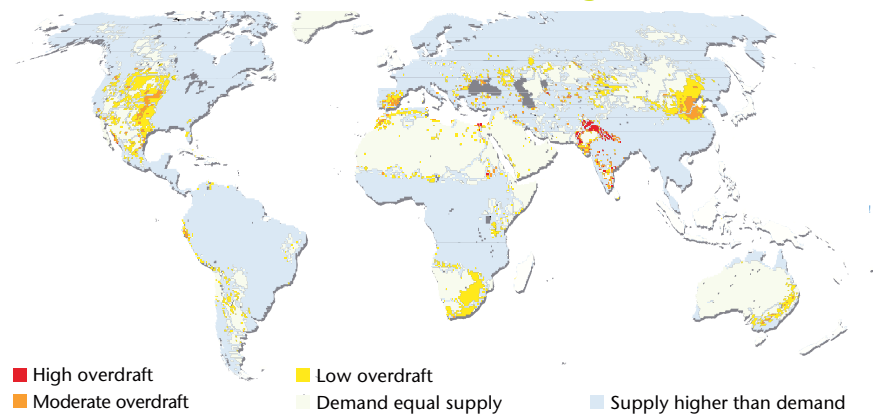
Agriculture

In many developing nations, irrigation accounts for over 90% of water withdrawn from available sources for use. In England where rain is abundant year round, water used for agriculture accounts for less than 1% of human usage. Yet even on the same continent, water used for irrigation in Spain, Portugal and Greece exceeds 70% of total usage.

Irrigation has been a key component of the green revolution that has enabled many developing countries to produce enough food to feed everyone. More water will be needed to produce more food for 3 billion more people. But increasing competition for water and inefficient irrigation practices could constrain future food production.



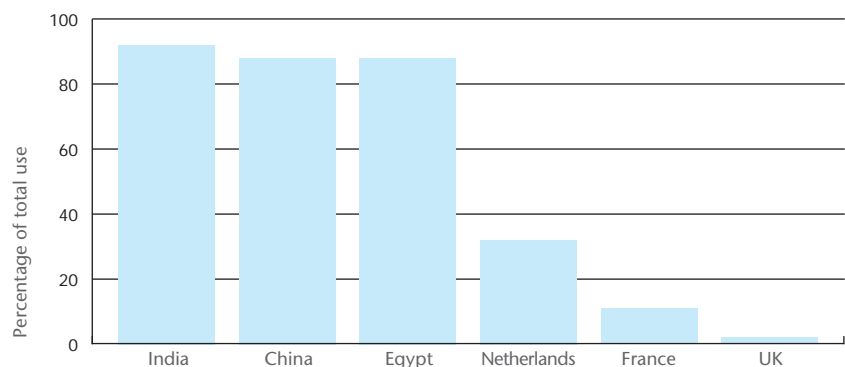
Unsustainable water withdrawals for irrigation⁷



Ref. 7: Millennium Ecosystem Assessment, "Ecosystems and Human Well-being: Synthesis", 2005.

Globally, roughly 15-35% of irrigation withdrawals are estimated to be unsustainable. The map indicates where there is insufficient freshwater to fully satisfy irrigated crop demands.

Percentage of total water used for irrigation⁸



Ref. 8: Saeijs, H.F.L. & Van Berkel, M.J., "Global Water Crisis, the Major Issue of the 21st Century", European Water Pollution Control, 1995. Vol. 5.4 pp. 26-40; cited by Corporate Water Policies, Dec. 2003.



After agriculture, industry is the second largest user of water. However, the amount of water used varies widely from one type of industry to another.

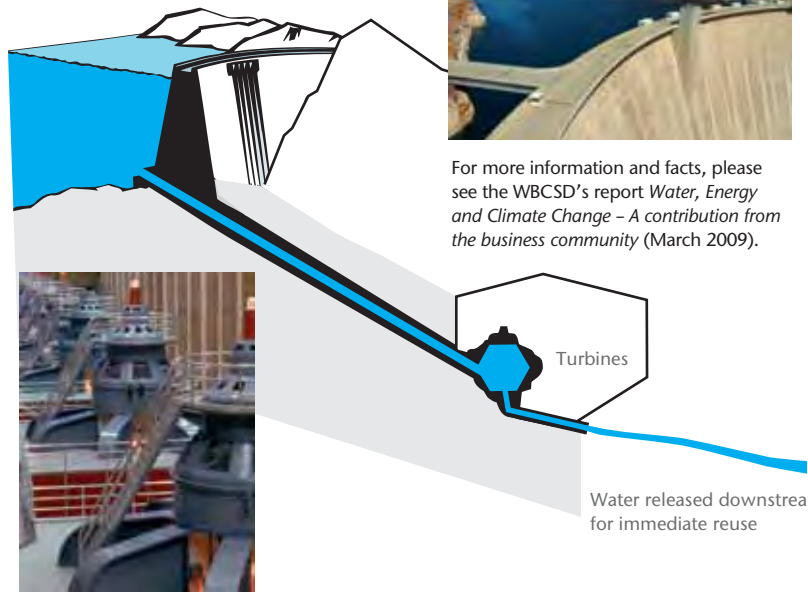
[No water, no business]

Water for energy

Multi-purpose hydro projects manage water for many interests: flood control, irrigation, recreation and drinking water, as well as energy.

[Water is used to generate energy; energy is used to provide water]

Storage reservoir



For more information and facts, please see the WBCSD's report *Water, Energy and Climate Change – A contribution from the business community* (March 2009).

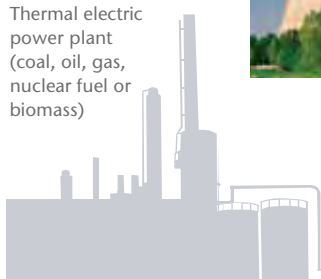
Water released downstream for immediate reuse

Cooling water

The largest single use of water by industry is for cooling in thermal power generation.



Thermal electric power plant (coal, oil, gas, nuclear fuel or biomass)



Cooling water

Cooling tower

Steam to atmosphere to fall as rain in another region within months



Pond or lagoon to cool

Water returned to river or lake for reuse within days



Process water

Industry uses water in various production processes and chemical reactions, as well as to make steam for direct drive power. Increasingly, industry recycles and reuses this water over and over again.

An electric power company in Japan developed a high-efficiency heating and cooling system that uses waste heat from a public sewage treatment plant. The result is 92% less water used and CO₂ reductions compared to a common office building system.

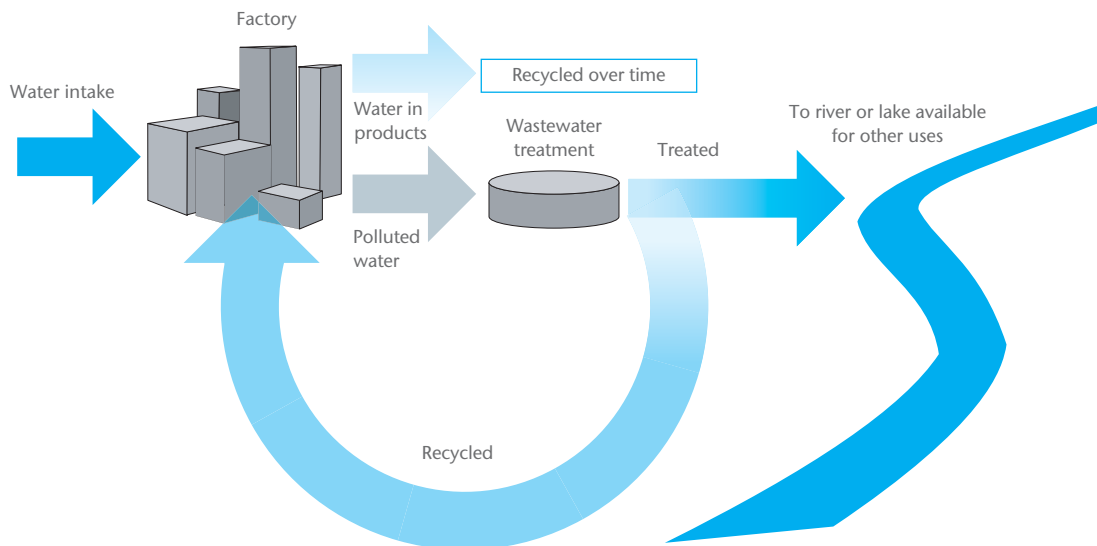
When the length of the “chemical polishing step” in the semiconductor manufacturing process is reduced, significant amounts of water can be saved. This also reduces chemical and energy use.

Efforts in a food & beverage company’s manufacturing plants in India have reduced water use by over 60%, saving more than 2 billion liters of water in two years alone.

A paperboard mill in the US implemented sustainable water use reduction improvements while increasing its production over the past 40 years. The amount of water used per ton of paper produced decreased by 70%.

Water for products

Water is used to make every product on Earth, and so all businesses, and all sectors, depend on it in some way. Some water experts use the term “virtual water” to describe the water that is embedded both in agricultural and manufactured products, as well as the water used in the growing or manufacturing process. When a country exports goods, it is exporting “virtual water”. A concept in the same family is “water footprint”. This looks at the total direct and indirect volume of freshwater that is used or consumed to produce the goods and services consumed by an individual or community or produced by a business. Interestingly, many businesses have a supply-chain water footprint and/or an end-user footprint that is much larger than the operational water footprint. For example, think of the water it takes to grow and produce food products, and the water people need for personal washing and laundry.

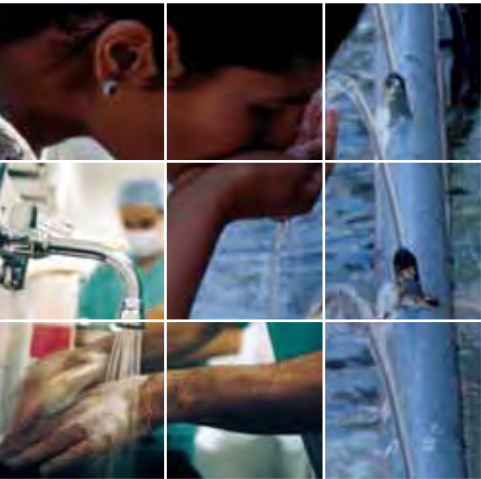


Water as a medium for waste disposal

Many businesses dispose of wastewater or cleaning water into natural freshwater systems. Rivers and lakes can “process” small quantities of waste that can be broken down by nature – indeed such ecosystem services are increasingly being recognized by business. However, when these limits are exceeded, water quality declines and the downstream water is no longer useable without expensive treatment.



People

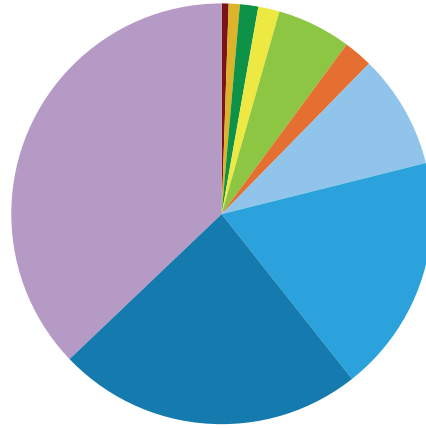


Individuals must have clean water for drinking or they fall ill and die. People also need freshwater for cooking, washing and sanitation.

Water: Essential to health
Over 5,000 children die each day due to dirty water or poor hygiene⁹

1.8 million people die every year from diarrhoeal diseases (including cholera) – the equivalent of 15 killer tsunamis each year or 12 Boeing 747 crashes every day.

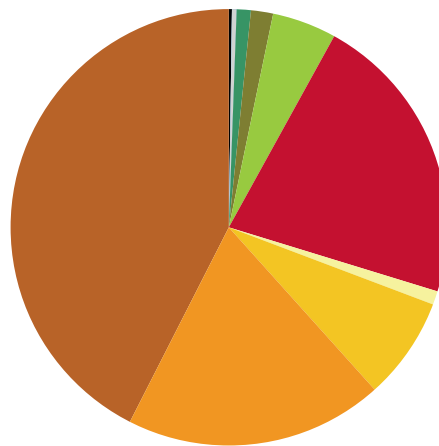
People without improved drinking water, 2006 (in millions)



884 million people use an unimproved drinking water source¹⁰

- Sub-Saharan Africa, 328
- Southern Asia, 207
- Eastern Asia, 162
- South-eastern Asia, 78
- Western Asia, 21
- Latin America & Caribbean, 47
- Commonwealth of Independent States, 16
- Northern Africa, 12
- Developed regions, 8
- Oceania, 5

People without improved sanitation, 2006 (in millions)



2.5 billion people are without improved sanitation

- Southern Asia, 1,079
- Eastern Asia, 485
- South-eastern Asia, 187
- Western Asia, 33
- Sub-Saharan Africa, 546
- Latin America & Caribbean, 121
- Northern Africa, 37
- Commonwealth of Independent States, 29
- Developed regions, 12
- Oceania, 4

Ref. 9: UNICEF, March 2004.

Ref. 10: UNICEF & World Health Organization, "Progress on Drinking Water and Sanitation: Special Focus on Sanitation", 2008.

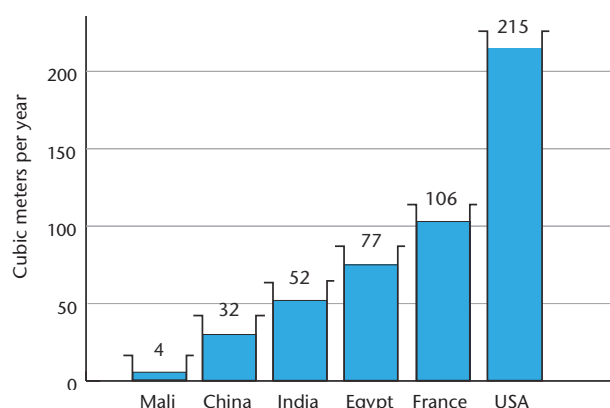


Cholera, *Vibrio cholerae*



Per capita use of water

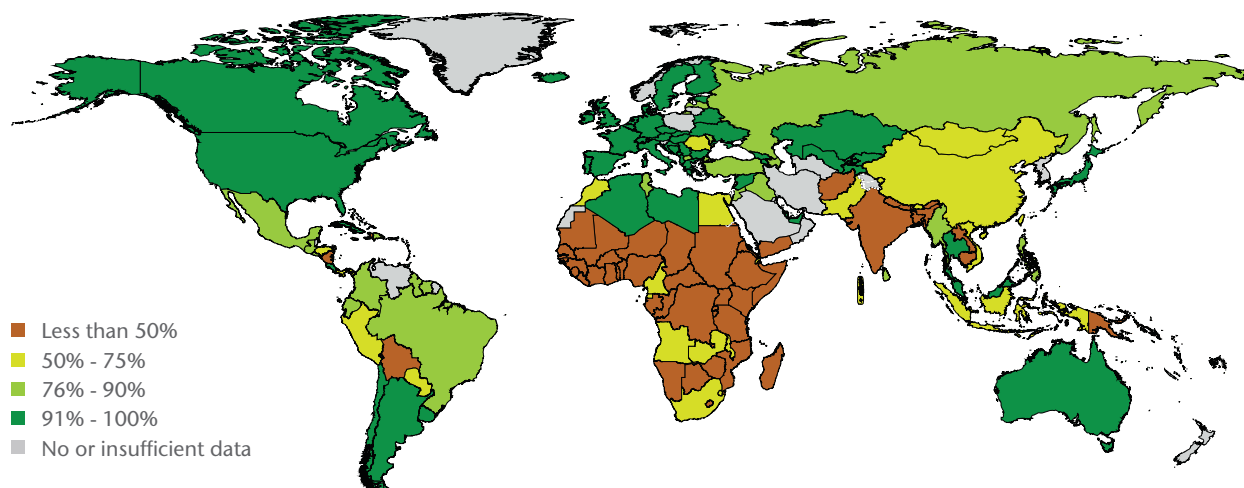
The adjacent chart derived from Aquastat data shows the wide variation in average per capita domestic consumption from different nations. Humans need a minimum of two liters of drinking water per day to survive, which is less than one cubic meter per year.



Source: AQUASTAT - FAO's information system on water and agriculture (10-2-2003)

Sanitation coverage remains low in sub-Saharan Africa and Southern Asia¹¹

Improved sanitation coverage, 2006



Global coverage figures from 2006 indicate that of every 10 people worldwide:

- About 2 have no sanitation facilities and utilize fields, forests, bushes, water or open spaces
- More than 1 uses unimproved sanitation facilities – or facilities that do not ensure hygienic separation of excreta from human contact
- 7 have access to improved or shared sanitation facilities¹²

Achieving Target 10 of the Millennium Development Goals (MDGs) is to “halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.”

At current trends, the world is expected to fall short of meeting the *sanitation* target by 10%, or more than 700 million people, and would still leave 1.6 billion people with inadequate sanitation if the goal is met.

The WHO/UNICEF Joint Monitoring Programme (2008) reports that the world is on track to meet the *drinking* water target but that sub-Saharan Africa lags behind.

Access to water is above all a local distribution issue. People in urban slums are often as close to water resources as are the more fortunate urban rich, but they often do not have access to the infrastructure in place.

Ref. 11, 12: UNICEF & World Health Organization, “Progress on Drinking Water and Sanitation: Special Focus on Sanitation”, 2008.

Water stress and scarcity



The concept of water stress is relatively simple: it applies to situations where there is not enough water for all uses, whether agricultural, industrial or domestic. Defining thresholds for stress in terms of available water per capita is more complex, however, entailing assumptions about water use and its efficiency. Nevertheless, it has been proposed that when annual per capita renewable freshwater availability is less than 1,700 cubic meters, countries begin to experience periodic or regular water stress. Below 1,000 cubic meters, water scarcity begins to hamper economic development and human health and well-being.

A fifth of the world's people, more than 1.2 billion, live in areas of *physical* water scarcity, where there is simply not enough water to meet all demands, including environmental flows. More than 1.2 billion people live in areas of *economic* water scarcity, where human capacity or financial resources are likely to be insufficient to provide adequate water resources.¹⁴

In 60% of European cities with more than 100,000 people, groundwater is being used at a faster rate than it can be replenished.¹⁶ Even if some water remains available, it costs more and more to capture it.

Cities that have experienced aquifer drops between 10 to 50 meters include Mexico City, Bangkok, Manila, Beijing, Madras and Shanghai.¹⁷

Ref. 13: World Bank Group, "Environment Matters 2003", 2003. www.worldbank.org

Ref. 14, 15: Earthscan and International Water Management Institute, "Water for Food, Water for Life: A Comprehensive Assessment of Water Management in Agriculture", 2007, London: Earthscan, and Colombo: International Water Management Institute.

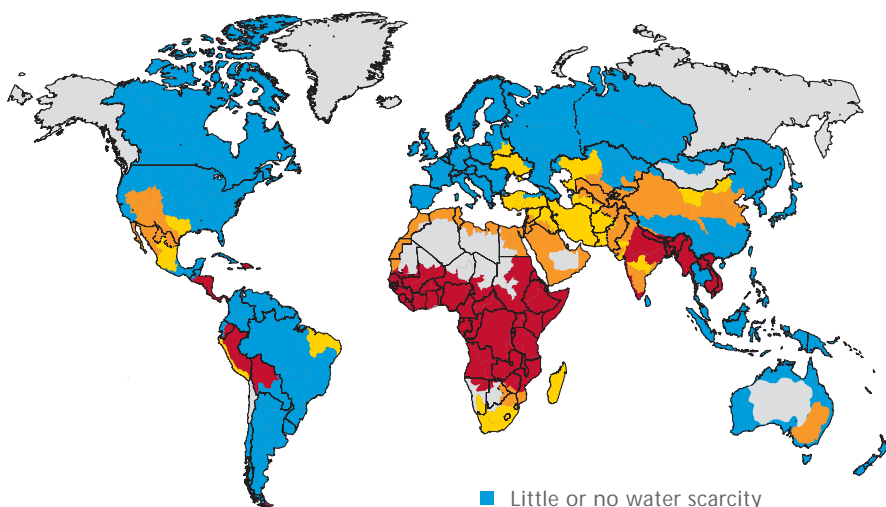
Ref. 16: European Environment Agency, "Europe's Environment: The Dobbris Assessment", 1995.

Ref. 17: Foster, S., A. Lawrence and B. Morris, "Groundwater in Urban Development", World Bank Technical Paper no.390, The World Bank, 1998.

As farmers, industry and people take too much water there is nothing left for nature.

Increases in water use have resulted in high environmental costs, including loss of biodiversity as well as affecting natural water systems such as rivers and aquifers. Half of the world's wetlands have disappeared over the last century, with some rivers now no longer reaching the sea, and over 20% of the estimated 10,000 freshwater fish species are now endangered or extinct.¹³

Areas of physical and economic water scarcity¹⁵



- Little or no water scarcity
- Physical water scarcity
- Approaching physical water scarcity
- Economic water scarcity
- Not estimated

- **Little or no water scarcity:** Abundant water resources relative to use, with less than 25% of water from rivers withdrawn for human purposes.
- **Physical water scarcity:** Water resources development is approaching or has exceeded sustainable limits. More than 75% of river flows are withdrawn for agriculture, industry and domestic purposes (accounting for recycling of return flows).
- **Approaching physical water scarcity:** More than 60% of river flows are withdrawn. These basins will experience physical water scarcity in the near future.
- **Economic water scarcity:** Human, institutional and financial capital limit access to water even though water in nature is locally available to meet human demands. Water resources are abundant relative to water use, with less than 25% of water from rivers withdrawn for human purposes, but malnutrition exists.

Four ways people contribute to water stress

1. Excessive withdrawal from surface waters

Over the past 30 years, the Aral Sea in the former Soviet Union has shrunk to less than half of its original size. The demise of the Aral Sea was caused primarily by the diversion of the inflowing Amu Dar'ya and Syr Dar'ya rivers to irrigate water-intensive cotton and rice crops. This graphic shows the disappearance of the Aral Sea from 1957 to 2007. By 1987, about 60% of the Aral Sea's volume had been lost, its depth had declined by 14 meters, and its salt concentration had doubled.¹⁸



2. Excessive withdrawal of water from underground aquifers

Along much of the west coast of India, excessive freshwater abstraction has allowed sea water to enter aquifers, thereby making the water so saline that it is unfit for human use. These consequences have been compounded due to excess irrigation water containing fertilizers and pesticides leaching into these aquifers.



3. Pollution of freshwater resources

Pollution can be so severe that the freshwater is no longer useable without incurring unacceptably high clean-up costs.

Pollution from many small paper mills using outdated technology has depleted the oxygen from several river stretches in China, making them unfit for consumption by any form of life. China entered into a joint venture with a Finnish company to build a state of the art paper mill. China then closed the polluting firms and these rivers are making a remarkable recovery.¹⁹



4. Inefficient use of freshwater

Poor irrigation practices, leakage in water delivery systems, inefficient use by industry and excessive consumption by individuals can all contribute to water stress.

Ref. 18: UNEP/GRID-Arendal, Vital Water Graphics 2, 2008. maps.grida.no/go/graphic/the-disappearance-of-the-aral-sea

Ref. 19: "The River Runs Black: The Environmental Challenge to China's Future" Economy, E. C., 2004.

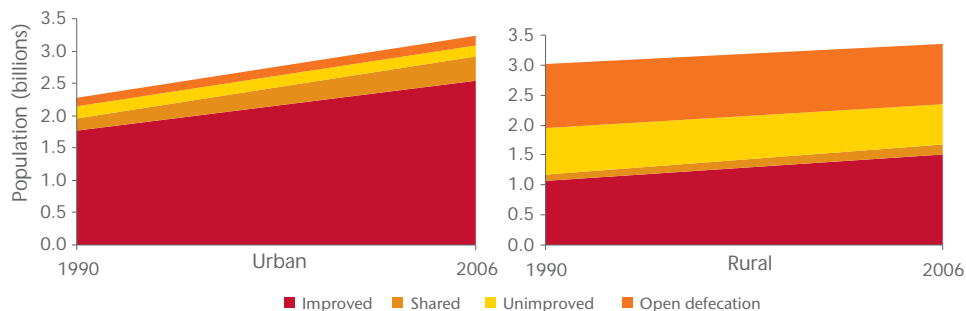
Signs of hope



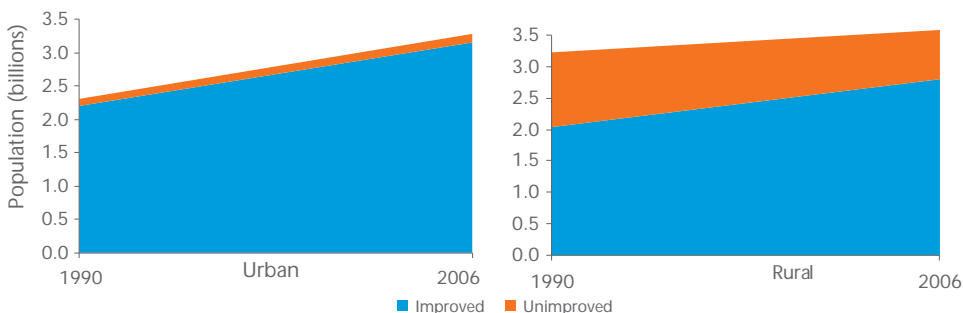
More and more people have access, urban areas progressing faster

Trends in sanitation practices and drinking water coverage by population, 1990-1960²⁰

Sanitation practices



Drinking water coverage



The world is on track to meet the MDG drinking water target. Current trends suggest that more than 90% of the global population will use improved drinking water sources by 2015.

Some African countries have been making rapid progress in drinking water coverage. For example, Burkina Faso was only 34% covered in 1990 but was 72% covered in 2006; Namibia was 57% covered in 1990 but was 93% covered in 2006.

Other countries have quickly increased the proportion of their population with access to improved sanitation too; for example, Myanmar was only 23% covered in 1990 but was 82% covered in 2006.²¹

Ref. 20, 21: UNICEF & World Health Organization, "Progress on Drinking Water and Sanitation: Special Focus on Sanitation", 2008.

Examples of "best management practices" and use of improved technology

- Drip irrigation uses plastic pipes that release water directly onto the roots of the plants without flooding the entire field, and recapture any excess water for reuse.
- Ashkelon, Israel – a new desalination plant on the Mediterranean Sea, just north of Gaza is delivering freshwater at US\$ 0.50 per cubic meter down from US\$ 2.50 in the early 1990s. This was achieved by an improved reverse osmosis system requiring less energy to drive seawater through the desalination unit.
- Singapore is recycling "gray water" to drinking quality standards by using a new filtration technology (Stockholm Industry Water Award winner in 2007).
- An auto/truck manufacturer operating in an arid region of Mexico reduced its water consumption per unit of output by 90% (Stockholm Industry Water Award winner in 2001).



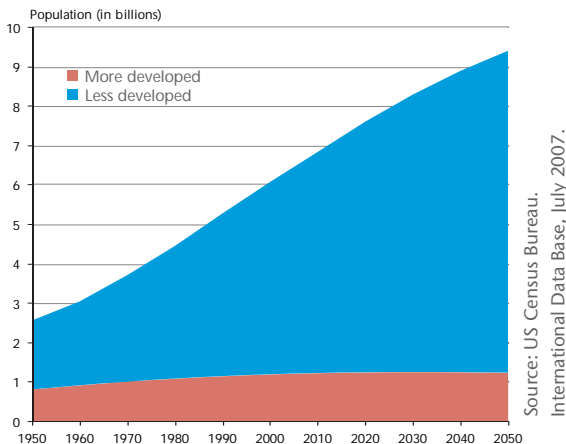
Warning signs

Trends that will affect freshwater use

These six trends are increasing pressure to better manage water:

1. Population Growth

Projected to reach over 8 billion in 2030 and 9 billion by 2050.



2. Increasing affluence

The rate of poverty alleviation is increasing, especially within the two population giants of China and India. However, increasing affluence inevitably means more water consumption: from needing clean freshwater 24 hours a day, 7 days a week and basic sanitation service, to demanding water for gardens and car washing, to wanting jacuzzis or private swimming pools.

3. Expansion of business activity

Business activity ranging from industrialization to services, such as tourism and entertainment, continues to expand rapidly. This expansion requires increased water services including both supply and sanitation, which can lead to more pressure on water resources and natural ecosystems.

4. Rapid urbanization

The trend towards urbanization is accelerating. Small private wells and septic tanks that work well in low-density

communities are not feasible within high-density urban areas. Urbanization requires significant investment in water infrastructure in order to deliver water to individuals and to process the concentrations of wastewater – both from individuals and from business. These polluted and contaminated waters must be treated or they pose unacceptable public health risks.

“Every minute during the next twenty years, 30 Indians will leave rural India for urban areas. India will need some 500 new cities. If there were ever a time to focus on the smart growth of our urban areas, that time is now.”

IBM, Smarter Cities

5. Climate change

Climate change could increase annual precipitation and make more freshwater available in some places. Rising temperatures, however, could increase the rate of evaporation from surface waters and reservoirs and lead to the loss of freshwater held in glaciers. Furthermore, increased rainfall might come in the form of storms that lead to flooding and damage, thereby doing more harm than good. Climate change poses a series of risks to water availability and water management systems, although much uncertainty remains.

6. Aging infrastructure

In the US and Europe, drinking and wastewater infrastructure is aging. The costs and environmental risks due to failure are worrying. For example, according to the US EPA (2007), in the US every year some 240,000 drinking water mains break costing billions in lost water; wastewater collection systems experience some 75,000 sanitary sewer overflows, discharging 3-10 billion gallons of untreated wastewater into the environment.

Good news & Bad news

There is a lot of freshwater in the world ...	It is not always where man needs it
Water is free from nature ...	Infrastructure needed to deliver water is expensive
In many areas, water is easily accessible at a low cost ...	People assume it will always be available & take it for granted
Nature is constantly recycling & purifying water in rivers & lakes ...	Man is polluting water faster than nature can recycle it
There is a huge amount of water underground ...	Man is using this water faster than nature can replace it
5.7 billion people have reasonable access to clean water ...	About 800 million do not
4 billion people have at least basic sanitation ...	2.5 billion do not
Millions are working their way out of poverty ...	Affluent people use more water
The pace of industrialization is increasing ...	Industry will require more freshwater
Industry is becoming more efficient in its water use ...	Many industries are still using water unsustainably/inefficiently
Awareness of water issues is increasing ...	Translating awareness into action can be slow

Economic considerations



The estimated total spending, excluding program costs, required in developing countries to meet the water component of the MDG target is US\$ 42 billion, while for sanitation it is US\$ 142 billion. When including maintaining and replacing existing infrastructure and facilities and extending coverage to existing and future increases in population, spending on water and sanitation is roughly equal at US\$ 360 billion each, or US\$ 36 billion each annually from 2005 to 2014.²²

Water supply and sanitation require a huge amount of capital investment in infrastructure, such as pipe networks, pumping stations and water treatment works. It is estimated that OECD nations need to invest at least US\$ 200 billion per year to replace aging water infrastructure to guarantee supply, reduce leakage rates and protect water quality.²³

Someone has to pay!

■ When revenue equals expenses, sustainable water service is possible.

■ When expenses exceed revenues, water service deteriorates and is not sustainable.

Once infrastructure is in place, operating water supply and sanitation systems entails significant ongoing costs to cover personnel, energy, chemicals, maintenance and other expenses.

France and the UK will have to increase their water spending as a share of gross domestic product (GDP) by about 20% to maintain water services at their current levels. In the US, it is estimated that annual investments of US\$ 23 billion will be needed over the next 20 years to maintain water infrastructure at the current service level and to comply with stricter standards.²⁴

The sources of money to meet these capital and operational costs are essentially tariffs, taxes and transfers – the “3Ts” – or a combination of these. Indeed, strategic financial planning that blends the “3Ts” provides an important means for agreeing on water- and sanitation-related investment targets, and how they will be achieved. Financing needs can be reduced by improving the efficiency of water utilities, for example by reducing leakages that can represent 10-70% of water production.²⁵

But this is where the economics of water management start to become extremely complex as they intersect with social and broader economic policy and the value of benefits associated with increasing coverage of improved water supply and sanitation must be included in the equation – estimates range from US\$ 3 to US\$ 34 per dollar invested.²⁶ Even though such issues are beyond the scope of this document, they are highly relevant.

A recent study in the US estimates that one dollar of water and sewer infrastructure investment increases GDP in the long-term by US\$ 6.35.

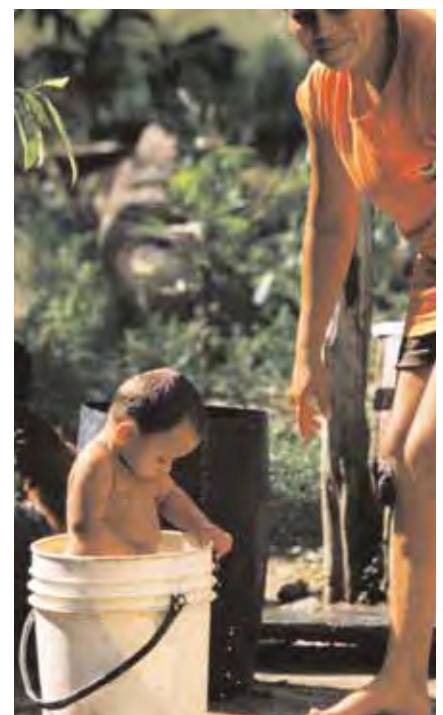
Also, protecting one hectare of a wetland for source water protection may yield a primary benefit of over US\$ 4,000 annually in avoided treatment costs, and an additional US\$ 10,000 annually in other ecosystem services.²⁷

Ref. 22, 26: Hutton, Guy and Jamie Bartram, “Global costs of attaining the Millennium Development Goal for water supply and sanitation”, Bulletin of the World Health Organization, Volume 86, Number 1, January 2008, 1-80.

Ref. 23: Smets, Henri, “The cost of meeting the Johannesburg targets for drinking water”, Water Academy France (Académie de l’eau), March 2004.

Ref. 24, 25: OECD, “Managing Water for All: An OECD perspective on pricing and financing – key messages for policy makers”, 2009.

Ref. 27: The U.S. Conference of Mayors, “Local government investment in municipal water and sewer infrastructure: Adding value to the national economy”, Mayors Water Council, 14 August 2008, Washington D.C.



What can industry do to alleviate water stress?

Put its own house in order by



Measuring and monitoring water use

Understanding the water “footprint” of the business both inside and outside the corporate “fenceline”

Continuing to reduce water consumption

per dollar of output and work towards the goal of zero discharge by:

- Recycling and reusing water
- Lowering toxic and other contaminants in all operations involving water
- Changing production processes to be more water efficient



Encouraging suppliers and purchasers

up and down the supply chain to adopt best management practices – assisting small- and medium-sized enterprises to improve water management



Innovating

Searching for new, more efficient water treatment technologies



Enter into creative partnerships with

Municipalities where business operates to develop cost-effective water supply and sanitation options



Non-governmental groups to encourage water conservation and improved water management systems



The scientific community to improve understanding of water resources and their management and to develop technologies to get the most value out of the water cycle





About the WBCSD

The World Business Council for Sustainable Development (WBCSD) is a unique, CEO-led, global association of some 200 companies dealing exclusively with business and sustainable development. Our members are drawn from 36 countries and 22 major industrial sectors. We also benefit from a global network of about 60 national and regional business councils and partner organizations.

The Council provides a platform for companies to explore sustainable development, share knowledge, experiences and best practices, and to advocate business positions on these issues in a variety of forums, working with governments and non-governmental and intergovernmental organizations.

Our mission is to provide business leadership as a catalyst for change toward sustainable development, and to support the

business license to operate, innovate and grow in a world increasingly shaped by sustainable development issues.

Our objectives include:

- Business leadership** – to be a leading business advocate on sustainable development;
- Policy Development** – to help develop policies that create framework conditions for the business contribution to sustainable development;
- The Business Case** – to develop and promote the business case for sustainable development;
- Best Practice** – to demonstrate the business contribution to sustainable development and share best practices among members;
- Global Outreach** – to contribute to a sustainable future for developing nations and nations in transition.