

issue brief

Water Scarcity

This CAFAmerica Issue Brief presents a synopsis of facts, research and funding opportunities for causes you care about. It isn't meant to be a comprehensive report, and for that reason, provides a list of resources and website where you can learn more.

We hope you will use this as a starting point to investigate your funding interests, and find out how you can make a global difference.

CAFAmerica

King Street Station
1800 Diagonal Road, Suite 150
Alexandria, VA 22314-2840

Tel: 1 703 549 8931

Fax: 1 703 549 8934

Email: info@cafamerica.org

Web: www.cafamerica.org

EIN: 43-1634280

BACKGROUND

Water scarcity is gauged in cubic meters. When available freshwater resources fall below 1,700 cubic meters per person annually, a country may experience water stress. If that figure dips below 500 cubic meters – the amount necessary to sustain a life – water scarcity occurs. Unresolved, water scarcity leads to a severe shortage of water.

These numbers, however, do not convey the human tragedy provoked by water scarcity around the globe. Shortage of food is not the only serious health consequence of drought. According to the World Health Organization, 5,000 children die every day from “largely preventable causes” linked to water scarcity. Annually, over five million people die from waterborne illnesses.¹

Damage to the environment can be equally devastating: one alarming result is the loss of 50% of the world's wetlands since 1900.²

Stress on the earth's most valuable resource stems from both human and natural causes. In particular, the rapid growth and simultaneous urbanization of the global population threaten to exhaust existing freshwater resources faster than they can be replenished.³ The rising expectations that often accompany globalization may also impact the availability of water, as consumers increasingly demand amenities like home dishwashers and swimming pools. Even the rising popularity of a Western diet will likely have consequences for global water resources: “one kilogram of grain-fed beef needs at least 15 cubic meters of water, while a kilo of cereals needs only up to three cubic meters.”⁴

Compounding all these factors is the increasing variability in climate attributed to global warming. As a result of climate change, some regions may receive more rain while other regions will experience unexpected droughts. Some experts warn of a resurgence of malaria over the next fifty years in Brazil, the southern United States, and Central Asia due to warmer, wetter climates.⁵

CHALLENGES

Currently, we use only half of the water available to us. Still, inefficient management and allocation of the water resources we do access are putting nations at risk for water security. For example, approximately 40% of Mexico City's water is lost due to faulty pipes constructed over a century ago.⁶ In the Middle East, poorly managed drainage and irrigation projects under Saddam Hussein's government led to the loss of 90% of wetlands in Southern Iraq.

Even as the demand for water and food grows with our increasing global population, pollution from sewage and industrial contamination threatens to reduce or destroy existing water resources. Additional threats to our ecosystem include deforestation and loss of croplands due to overpopulation, urban sprawl, over harvesting, and introduction of invasive species.

In addition to potentially irreversible effects on the ecosystem, pollution can have devastating health consequences. Efforts to improve the safety of drinking water in Bangladesh through over 4 million tube wells proved disastrous when arsenic contaminated water caused the “largest mass arsenic poisoning in history.”⁷

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1 “Water Scarcity: A Looming Crisis,” Kirby, Alex, October 19, 2004, BBC News online, www.news.bbc.co.uk

2 www.unesco.org/water/

3 “Europe's Environment – The Dobris Assessment,” The European Environment Task Force, May 21, 1995, www.reports.eea.europa.eu

4 “Water Scarcity: A Looming Crisis,” Kirby, Alex, October 19, 2004, BBC News online, www.news.bbc.co.uk

5 “Fact Sheet: The Impacts of Weather and Climate Change,” The Worldwatch Institute, September 15, 2003, www.worldwatch.org

6 “Water Hotspots: Mexico City,” BBC News Online, www.news.bbc.co.uk

7 “Water: A Shared Responsibility,” UN World Water Development Report, Second edition, 2006, www.unesco.org/water

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Polluted water is also linked to diarrheal diseases like cholera, typhoid fever, and dysentery. In addition, water scarcity often prompts households to store water, which can become contaminated and harbor mosquitoes that cause diseases including dengue fever and malaria.⁸

WHAT IS BEING DONE?

As the potential for future severe water shortages becomes evident, governments and organizations worldwide are launching diverse efforts to preserve available water sources.

- **Raised awareness:** Recognizing the importance of water security to alleviating poverty, the United Nations sponsors several programs to raise global awareness. Projects include promoting World Water Day celebrations annually on March 22, proclaiming 2005–2015 the International Decade for Action “Water for Life”, and designating 2008 as the International Year of Sanitation. With the help of these efforts, the United Nations hopes to achieve Millennium Development Goal number 7 to “reduce by half, by 2015, the proportion of people without sustainable access to safe drinking water.”
- **International collaboration and coordination:** Water conservation efforts include a growing focus on greater international collaboration on management of shared resources as key to the preservation of existing water resources. For over a decade, five Central Asian nations—Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan—have been sharing the resources of the Aral Sea, “billed as the worst ecological disaster in human history,” after shrinking to half its size in less than forty years.⁹
- **New technology** also enables nations to better manage their existing resources. For example, drought-resistant plants and drip irrigation reduce the amount of water used for agriculture. The Africa Project Exchange, launched by the World Economic Forum, introduced a “play pump,” a merry-go-round on which children can pump water as they play, in Mozambique.¹⁰ Future initiatives may involve innovative ways to recycle wastewater, desalination systems, and the use of “virtual water.”

HOW YOU CAN HELP?

- **Conserve water.** Adopt simple steps at home to reduce your water consumption: install low flow showerheads and only run dishwashers with a full load. For more water-saving tips, visit www.wateruseitwisely.com.
- **Express your concern.** Write to your local representative urging them to make water conservation a national priority.
- **Invest in infrastructure.** Poorer nations will be harder hit by future water shortages due to inadequate infrastructures. The United Nations estimates that current US investment in foreign aid in this sector needs to double in order to meet the Millennium Development Goals’ water-related target. Do your part by contributing to charities that aim to strengthen and expand infrastructure necessary to ensure a safe, adequate water supply.
- **Contribute.** If you are interested in the issues surrounding water scarcity, consider giving to charities that support anti-pollution efforts or help victims of waterborne diseases like typhus and dysentery. To learn about eligible charities, visit CAFAmerica’s website www.cafamerica.org or email us at info@cafamerica.org.

SUPPORTING WATER SECURITY WITH CAFAmerica

TERI, India

Driven by its mission to aid global sustainable development, The Energy and Resources Institute (TERI) conducts research in the fields of energy, environment, and sustainable rural development. Since its establishment 25 years ago, TERI has expanded to North America and Europe. Future plans include projects in Africa and Asia. Based in New Delhi, TERI funds environmentally friendly projects, notably solutions to increase access to water in poor regions and improve sanitation methods. Programs include an annual conference in New Delhi to foster discussion of sustainable development and how to achieve the Millennium Development Goals within the development field, TERI University, and water management initiatives in southern and northern India.

⁸ “Ten Facts About Water Scarcity,” World Health Organization, March 20, 2007, www.who.int.

⁹ “3rd World Water Forum: Regional Cooperation for Shared Water Resources,” Asian Development Bank (ADB), www.adb.org.

¹⁰ World Economic Forum Launches “Africa Water Project Exchange” A Unique Matchmaking Service To Create Partnerships On Water Projects Across The Continent, June 2, 2004, Corporate Social Responsibility News, www.csrwire.com.



For the past three years, CAFAmerica grants have contributed to TERI's watershed program in two Indian regions. Through these grants, TERI hopes to address a rapidly growing nation-wide water problem. In particular, TERI-funded projects emphasize community awareness and capacity building as central to socio-economic development. Through community trainings, implementation of water management systems, and construction of toilets and compost heaps, TERI has improved agricultural practices and sanitation, and safe guarded water supplies in the two regions.

Since 2004, CAFAmerica has granted over \$800,000 to TERI. To learn more about this organization, visit www.teriin.org.

China Women's Development Foundation, China

Since 1988, the China Women's Development Foundation has been improving Chinese women's quality of life by reducing poverty, fighting for legal rights for women, and providing greater access to education and training. Projects include a poverty alleviation fund, a foundation to help laid-off women, disaster rescue efforts, and the establishment of China Women's College. The Foundation plans to expand an especially successful program, Land of Love, Water Cellar for Mothers, which helps families living in water scarce regions of Western China.

Given the arid climate, many rural families rely primarily on rainfall for drinking water. As a result, most families use approximately 110 cubic meters of water/person, only 3% of the world average for water use/person. In more mountainous regions, women collect drinking water by foot or in a cart from many miles away. A water cellar provides a convenient and economical method to collect rainwater but is often too expensive for poor families—construction of a water cellar typically costs \$125. One water cellar provides enough water for a five-person family for almost a year; two cellars allow the family to water their crops.

CAFAmerica has granted approximately \$1.3 million to the Foundation since the inception of Land of Love, Water Cellars for Women. Since its creation in 2000, the project has built over 100,000 rain collecting cellars and 1,200

small central supply projects in northwestern China benefiting over 1 million people. Thanks to this project, many families enjoy increased incomes generated by livestock and crops. With improvements in sanitation, the health of the people in the region has also improved dramatically. Over the next five years, the Foundation hopes to benefit an additional half a million people.

To learn more about this organization, visit www.mothercellar.cn.

To give to the organizations listed here, or another international charity of your choice, contact CAFAmerica today at info@cafamerica.org.



RESOURCES

Reports and Publications

Water: A Shared Responsibility. UN World Water Development Report, Second edition, 2006. Every three years, the United Nations publishes a comprehensive report of available freshwater resources and progress towards the water-related Millennium Development Goal. The next edition of the World Water Development Report will be published in 2009. To find out more and access additional reports, visit www.unesco.org/water.

Water and Food to 2025: Policy Responses to the Threat of Scarcity. Mark W. Rosegrant, Ximing Cai, and Sarah A. Cline, International Food Policy Institute and the International Water Management Institute, 2002. This book explores current threats to water and food security and proposes feasible actions to avert future crises.

Water for Life: Making it Happen. WHO/UNICEF Joint Monitoring Programme (JMP), 2005. A joint WHO/UNICEF report charting the effects of water scarcity and the efficacy of various responses. To read the full report, visit www.wssinfo.org.

Websites

Circle of Blue, www.circleofblue.org

Earth Policy Institute, www.earth-policy.org

FAO (Food and Agriculture Organization of the United Nations), www.fao.org

Global Water Challenge, www.globalwaterchallenge.org

GreenFacts, www.greenfacts.org

IUCN (the International Union for Conservation of Nature), www.cms.iucn.org

Millennium Water Alliance, www.mwawater.org

The World's Water, www.worldwater.org

U.S. Geological Survey, www.water.usgs.gov

Water Supply and Sanitation Collaborative Council, www.wash-cc.org

CAFAmerica...Your World. Your Move.

CAFAmerica connects US donors with charities worldwide, helping them make a difference for people and causes they care about. We work with individuals, families, corporations and foundations. We also enable foreign charities to fundraise easily in the US.

With a network of offices around the globe, we are experts in global giving and identifying local needs. CAFAmerica is an independent member of the CAF International Network, which spans six continents and manages more than \$4 billion in charitable funds.

CAFAmerica makes global giving effective and secure for everyone.

We're changing the culture of global giving, by creating a world where international giving is not uncommon, but done every day.

Join us in our commitment to make lasting change. Call us today for a free brochure, *Your Passport to Global Giving*, or visit our new website at www.cafamerica.org.