



Water – An Evaporating Resource?

Many scientists, policy makers, academics, business people, and politicians are beginning to speculate that water, not oil, will be the natural resource that causes the most human devastation in the future. This collection of articles, websites, and other web-based information presents some of the current thinking on this topic.



By 2030 nearly half of the world's population will inhabit areas with severe water stress, according to the Organization for Economic Cooperation & Development.

With oil over \$120 a barrel; prices for corn, wheat, copper, and steel close to record highs; carbon dioxide emissions causing climate change; and the world economy slowing, the last thing anyone needs is another crisis. Yet one is brewing now, in the U.S. and many other countries, where dwindling supplies of the world's most precious commodity—fresh, potable water—threaten the health and welfare of billions of people



Journal / Think Tank Articles:

Where Has All the Water Gone? by Maude Barlow. *The American Prospect*. 12 June, 2008.

In the first seven years of the new millennium, more studies, reports, and books on the global water crisis have been published than in all of the preceding century. Almost every country has undertaken research to ascertain its water wealth and the threats to its aquatic systems. The world is facing a water crisis due to pollution, climate change, and surging population growth of unprecedented magnitude.

[Full Text](#)

The Security Implications of Climate Change by John Podesta and Peter Ogden. *The Washington Quarterly*, Winter. Within the next 30 years, climate change is expected to cause destabilizing migration, massive food and water shortages, devastating natural disasters, and deadly disease outbreaks that will present serious security challenges not only to directly affected countries, but to the U.S. and the entire international community.

[Full Text](#)

The Global Water Crisis and the Coming Battle for the Right to Water by Maude Barlow. *Foreign Policy in Focus*. February 25, 2008.

The three water crises – dwindling freshwater supplies, inequitable access to water and the corporate control of water – pose the greatest threat of our time to the planet and to our survival. Together with impending climate change from fossil fuel emissions, the water crises impose some life-or-death decisions on us all. [Full Text](#)

Tradable Water Rights by Michael Greenstone. *The Brookings Institution*. Spring 2008

...the current distribution system in the [American] West means that water doesn't end up in the hands of those who value it most....water must be treated like other scarce resources. In practice, this requires a system that redirects water from individuals who don't value it highly to those who do. In other words, we need a market for water rights. [Full Text](#)

Draining Our Future: The Growing Shortage of Freshwater by Lester R. Brown. *The Futurist*. May/June 2008.

Global demand for freshwater has tripled in the last half century and will continue to grow along with population increases and economic development. Shrinking water supplies endanger not only the natural environment, but also food and energy supplies and even statehood and international stability. [Full Text](#)

There Will Be Water by Susan Berfield. *Business Week*. 12 June, 2008.

T. Boone Pickens thinks water is the new oil—and he's betting \$100 million that he's right. In the coming decades, as growing numbers of people live in urban areas and climate change makes some regions much more prone to drought, water—or what many are calling "blue gold"—will become an increasingly scarce resource. [Full Text](#)

The Impending Water Crisis in Central Asia: An Immediate Threat By Johannes F. Linn. *The Brookings Institute*. 19 June, 2008.

Central Asia lies at the heart of the Eurasian super-continent. Senior Fellow and Executive Director of the Wolfensohn Center for Development at Brookings, Johannes Linn, has argued that the region's stability and prosperity will be a key factor in determining how effectively the Eurasian economic space can integrate in the coming decades. [Full Text](#)

Facing the Freshwater Crisis by Cary Wolinsky. *Scientific American*. July, 2008.

Scientists expect water scarcity to become more common in large part because the world's population is rising and many people are getting richer (thus expanding demand) and because global climate change is exacerbating aridity and reducing supply in many regions. What is more, many water sources are threatened by faulty waste disposal, releases of industrial pollutants, fertilizer runoff and coastal influxes of saltwater into aquifers as groundwater is depleted. Because lack of access to water can lead to starvation, disease, political instability and even armed conflict, failure to take action can have broad and grave consequences. [Full Text](#)

Water ETFs: A Rising Tide by Palash R. Ghosh. *Business Week*. 05 October 2007.

While most people take water for granted as a routine part of daily existence, it is actually a commodity of limited supply and unlimited demand—thereby making companies involved in its provision, treatment, and delivery an attractive investment opportunity. [Full Text](#)

Desalination, for a World Short of Water by Vaughan Scully. *Business Week*. 21 May, 2008.

With oil over \$120 a barrel; prices for corn, wheat, copper, and steel close to record highs; carbon dioxide emissions causing climate change; and the world economy slowing, the last thing anyone needs is another crisis. Yet one is brewing now, in the U.S. and many other countries, where dwindling supplies of the world's most precious commodity—fresh, potable water—threaten the health and welfare of billions of people. [Full Text](#)

Colorado River farmers skip crops, send water to Southern California instead by Jennifer Bowles. *The Press-Enterprise*. 30 March 2008.

Thirsty Southern California cities are turning to water-rich farmers on the eastern edge of Riverside County for additional supplies to make up for the ongoing drought and other restrictions on the life-sustaining resource. [Full Text](#)

Spain sweats amid 'water wars' By Sue Lloyd-Roberts. *BBC Online*. 18 August 2008.

Spain is experiencing its worst drought in 40 years. Climate experts warn that the country is suffering badly from the impact of climate change and that the Sahara is slowly creeping north - into the Spanish mainland. Yet in Spain itself

there is little consensus about what is to be done. Indeed, such is the disagreement that journalists and politicians alike are calling it "water wars".

[Full Text](#)

Comparing Price and Non-Price Approaches to Urban Water Conservation by Sheila M. Olmstead and Robert M. Stavins. *National Bureau of Economic Research*. June 2008.

Urban water conservation is typically achieved through prescriptive regulations, including the rationing of water for particular uses.... A significant shift has occurred in pollution control regulations toward market-based policies in recent decades. This paper offers an analysis of the relative merits of market-based and prescriptive approaches to water conservation, where prices have rarely been used to allocate scarce supplies.

[Full Text](#)

Las Vegas water source could run dry by 2021 by Adam Tanner. *Reuters*. 12 February 2008.

The study by two researchers at the Scripps Institution of Oceanography at the University of California San Diego calculates a 10 percent chance that Lake Mead will run dry in six years and a 50 percent probability it will be gone by 2021 absent other changes.

[Full Text](#)

Trends in the hydrology of the western US bear the imprint of manmade climate change by Barbara Goss Levi. *Physics Today*. April 2008.

The snowpack in the western US has been declining over the past 50 years—a trend that should alarm urban dwellers of Los Angeles as much as skiers in Park City, Utah. Furthermore, the snow runoff has been occurring earlier in the year, so that less water flows through rivers during the later months of the summer. The decreasing river flow further stresses a region that is experiencing drier summer conditions.

[Full Text](#)

Studies / Reports:

National Water Program Strategy: Response to Climate Change by The Environmental Protection Agency (EPA) by Benjamin H. Grumbles. March 1, 2007.

This memorandum describes general principles to guide the National Water Program in responding to climate change, outlines an organizational approach to addressing climate change within the National Water Program and proposes developing a National Water Program strategy on climate change.

[Full Text](#)

Human Development Report 2006 - Beyond scarcity: Power, poverty and the global water crisis United Nations Development Program (UNDP). 2006.

Water is a source of life and a natural resource that sustains our environments and supports livelihoods – but it is also a source of risk and vulnerability. In the early 21st Century, prospects for human development are threatened by a deepening global water crisis. Debunking the myth that the crisis is the result of scarcity, this report argues poverty, power and inequality are at the heart of the problem.

[Full Text](#)

Water and Energy Futures in an Urbanized Asia; Sustaining the Tiger Edited by Erik R. Peterson and Rachel Posner, *Global Strategy Institute Center for Strategic and International Studies*, December 2007.

In the last 107 years, the proportion of humanity living in cities has skyrocketed from 13 to 50 percent—with 2007 marking the inflection point at which for the first time ever more people on Earth live in urban rather than rural areas. The UN predicts that 60 percent of the global population will live in cities by 2030. This implies major shifts in how we govern, allocate natural resources, manage infrastructure, conduct business, and much more.

[Full Text](#)

Climate Change Synthesis Report. Intergovernmental Panel on Climate Change. 2007

This Synthesis Report is based on the assessment carried out by the three Working Groups of the Intergovernmental Panel on Climate Change (IPCC). It provides an integrated view of climate change as the final part of the IPCC's Fourth Assessment Report.

[Full Text](#)

Climate change and global water resources. Global Environmental Change. 1999

By 2025, it is estimated that around 5 billion people, out of a total population of around 8 billion, will be living in countries experiencing water stress (using more than 20% of their available resources). Climate change has the potential to impose additional pressures in some regions. This paper describes an assessment of the implications of climate change for global hydrological regimes and water resources.

[Full Text](#)

Study on human rights obligations related to equitable access to safe drinking water and sanitation. Office of the United Nations High Commissioner for Human Rights (OHCHR).

"(.) the OHCHR, taking into account the views of States and other stakeholders, to conduct, within existing resources, a detailed study on the scope and content of the relevant human rights obligations related to equitable access to safe drinking water and sanitation under international human rights instruments, which includes relevant conclusions and recommendations thereon, to be submitted prior to the sixth session of the Council..." [Full Text](#)

Synthesis of the 4th World Water Conference; Mexico City Edited by Austria P. Martinez and P. van Hofwegen. 2006
To produce this synthesis, the Secretariat of the 4th World Water Forum and the World Water Council worked in close collaboration. The pillars of the synthesis are the session reports received, both from the session conveners and an internal team of rapporteurs, on the 206 topic-sessions and the local actions presented within these sessions. [Full Text](#)

Conflict and cooperation along international waterways by Aaron T. Wolf. *Water Policy*. 1998
Water is the only scarce resource for which there is no substitute, over which there is poorly developed international law and the need for which is overwhelming, constant and immediate. As a consequence, 'water' and 'war' are two topics being assessed together with increasing frequency. [Full Text](#)

Additional websites and related resources:

Environmental Protection Agency – Water

EPA enforces federal clean water and safe drinking water laws, provides support for municipal wastewater treatment plants, and takes part in pollution prevention efforts aimed at protecting watersheds and sources of drinking water. The Agency carries out both regulatory and voluntary programs to fulfill its mission to protect the nation's waters. [Full Text](#)

Water Down Under 2008

Conference for professionals with an interest in hydrology, water resources and the environment to join colleagues in Adelaide, South Australia 15-17 April 2008. [Full Text](#)

Water for Life Campaign

Earth Day Network works year round to broaden the environmental movement through education, programs and partnerships that affect change at the local, national and international level. Their mission is to educate and mobilize people, governments, and corporations to take responsibility for a clean and healthy environment. [Full Text](#)

World Water Council

The World Water Council was established in response to increasing concern from the global community about world water issues. Its mission is to promote awareness, build political commitment and trigger action on critical water issues at all levels; to facilitate the efficient management and use of water on an environmentally sustainable basis. [Full Text](#)

Expo Zaragoza; Water and Sustainable Development

The EXPO Zaragoza runs from 14 June till 14 September. Events are planned to deal with all aspects of water and sustainable development, including also ten thematic weeks which will deal with 25 specific subjects – from 'water and land' to 'new sources of water'. [Full Text](#)

No recommendation is made in respect of non-U.S. Government web sites and publications listed.

The U.S. Department of State assumes no responsibility for the content and availability of the resources listed above.

All Internet links were active at July 30, 2008.

American Reference Center, U.S. Embassy, P.O. Box 1190, Wellington

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