



Issue 138 March 21, 2014 | Focus on World Water Day 2014

The theme for World Water Day 2014 is Water and Energy. The United Nations states that water and energy are closely interlinked and interdependent. Energy generation and transmission require the use of water resources, particularly hydroelectric, nuclear, and thermal energy. Studies and resources in this issue include links to the World Water Day 2014 website, fact sheets, educational resources for World Water Day, and country reports from South Africa, the United States, and Vietnam.

We welcome your suggestions for future issues of the Weekly. Topics for upcoming issues include WASH and nutrition, behavior change, community-led total sanitation, household water treatment, and menstrual hygiene management.

WEBSITES

World Water Day 2014 Website. ([Link](#))

The objectives of World Water Day 2014 are to: raise awareness of the inter-linkages between water and energy; contribute to a policy dialogue that focuses on the broad range of issues related to the nexus of water and energy; and demonstrate—through case studies—to decision makers in the energy sector and the water domain that integrated approaches and solutions to water-energy issues can achieve greater economic and social impacts.

2014 UN-Water Annual International Zaragoza Conference. Preparing for World Water Day 2014. ([Link](#))

This conference is part of the road map for World Water Day 2014. In preparation for the event, nine UN agencies and programs plus more than 120 experts met to address the challenges, relationships, and joint solutions that arise in ensuring access, efficiency, and sustainability in the provision of water and energy.

FACT SHEETS/INFOGRAPHICS/VIDEOS

Thirsty Energy: Energy and Water's Interdependence, 2014. The World Bank. ([Infographic](#))

Statistics on water and energy consumption, risk assessments, etc.

World Water Day 2014. WaterAid. ([Video](#))

This video describes the purpose of World Water Day and WaterAid activities taking place to

promote the 2014 event.

Briefing Note: Connecting Water and Energy, n.d. Global Water Partnership. ([Link](#))

The energy and water sectors have different drivers behind their decision making: energy planners are more focused on diversifying sources of low-carbon energy production, while water managers have to satisfy a diversity of water users, including the environment. Cross-sector cooperation and coordination in policies and planning can maximize the supply of one resource while minimizing overuse of the other.

Information Brief on Water and Energy, 2014. United Nations. ([Link](#))

Energy and water are intricately connected. All sources of energy (including electricity) require water in its production processes: extracting raw materials, cooling thermal processes, cleaning, cultivating crops for biofuels, and powering turbines. Energy is also required to make water resources available for human use and consumption (including irrigation) through pumping, transportation, treatment, and desalination.

Information Brief on Water and Energy Sustainability, 2014. United Nations. ([Link](#))

Water and energy strategies need to be simultaneously rewired for the long term. A transition needs to be made from nonrenewable to renewable options, from increasing supply to a wise management of the resources available.

Information Brief on Securing Access to Water and Energy, 2014. United Nations. ([Link](#))

Coordination between water and energy development goals has been important since the early stages of economic development. This is true for the poor, who rely on coal and wood to produce primary energy that is essential to boil water and reduce its potential health risks, but also in a developed economy where energy and water are essential inputs in the production of food and a plethora of goods and services.

Water, Energy, Food—Nexus Thinking Explained, 2013. Institute of International and European Affairs (IIEA). ([Video](#))

Nexus thinking is a new way of thinking that recognizes the crucial interdependence of water, energy and food—a relationship that forms the core of the Environment Nexus project. This new IIEA video explores the deep interconnections among the three essential resources and highlights the need for nexus thinking to help meet the world's needs as it grows from 7 to 9 billion by 2050.

EDUCATIONAL RESOURCES

How to Teach World Water Day. *The Guardian*, Mar 2014. V Hannah. ([Link](#))

As World Water Day 2014 approaches, here are some useful ideas, links, and lessons to help teach students about this precious resource.

Resources for World Water Day 2014. WaterAid. ([Link](#))

Water is a great topic to inspire children to develop their creative writing skills while learning about how water is used around the world. To get started right away, explore these hand-picked downloadable resources.

GENERAL/OVERVIEW

4 Ways Water Shortages Are Harming Energy Production, *The Water Blog*, Jan 2014. D Rodriguez. ([Link](#))

In the past five years, more than 50 percent of the world's power utility and energy companies have experienced water-related business impacts. At least two-thirds indicate that water is a substantive risk to business operations.

Thinking about Water Differently: Managing the Water–Food–Energy Nexus, 2013. Asian Development Bank. ([Link](#))

Concerns about water security have reached the mainstream media, highlighting a significant threat to water availability at the global and regional level, particularly in certain parts of Asia and the Pacific. In fact, economic growth in the region will soon be constrained by water shortages, affecting the reliable production of food and energy. Part of the discussion is in terms of the water–food–energy nexus, that is, the links between the businesses supplying water, food, and energy.

Water Risks on the Rise for Three Global Energy Production Hot Spots, 2014. T Luo, World Resources Institute. ([Blog post](#))

Wood Mackenzie, supported by data and analysis from WRI's Aqueduct Water Risk Atlas, surveyed water risks among the world's top energy-producing regions. It found that three energy sectors face particularly high water risks: shale gas in the United States, coal production and coal-fired power in China, and crude oil in the Middle East.

COUNTRY REPORTS

South Africa – The Water–Energy–Food Security Nexus: Challenges and Opportunities for Food Security in South Africa. *Aquatic Procedia*, Vol 1, 2013. M Gulatia. ([Open access](#))

The interconnectedness of water, energy, and food production cycles translates into the interdependence of water, energy, and food pricing. This paper investigates the level of interconnectedness among these systems in South Africa and discusses how energy and water costs influence food prices in the country and affect food security.

South Africa – The Impact of Climate Variability on Water and Energy Demand: The Case of South African Local Governments. *Water and Environment Journal*, 27 (2013). M Ncube. ([Link](#))

There is a growing need to understand how climate change impacts not only people's livelihoods but also the level and cost of local government infrastructure required to provide basic commodities such as water and energy. In South Africa, few studies have examined the impact of climate change on operations of local governments. This paper examines the impact of rainfall variability on municipalities' water and energy demand.

USA – Energy-Water Nexus: The Water Sector's Energy Use, 2014. C Copeland, Congressional Research Service. ([Link](#))

This report discusses the United States' energy use and provides background on energy for facilities that treat and deliver water to end users and also dispose of and discharge wastewater. Most of the energy used for water-related purposes is in the form of electricity.

Vietnam – A Sustainability Assessment of the Rainwater Harvesting System for Drinking Water Supply: A Case Study of Cukhe Village, Hanoi, Vietnam. *Environ Eng Res*, 18(2); 2013. D Nguyen. ([Link](#))

Rainwater harvesting is a sustainable method of obtaining good-quality drinking water at low cost and with little energy expenditure. In the village of Cukhe engineers installed catchments, filters, and settled tanks in the existing rainwater harvesting facility to improve water quality, and 10 portable rainwater tanks to provide good-quality drinking water to poor households and kindergartens in the dry season. The study found that rainwater harvesting is a safe water supply option, especially when the other water sources are contaminated or too expensive to afford.

WASHplus Weeklies will highlight topics such as Urban WASH, Indoor Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus Knowledge Resources Specialist, at dacampbell@fhi360.org.



About WASHplus - WASHplus, a five-year project funded through USAID's Bureau for Global Health, supports healthy households and communities by creating and delivering interventions that lead to improvements in access, practice and health outcomes related to water, sanitation, hygiene (WASH) and indoor air pollution (IAP). WASHplus uses at-scale, targeted as well as integrated approaches to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. For information, visit www.washplus.org or email: contact@washplus.org.