

Fast Facts

An estimated **260 river basins** are shared by two or more countries, making conflicts over scarce water resources, as well as opportunities for cooperation, a major theme for the 21st century.¹

About **170 cubic kilometers** of water evaporates from the world's reservoirs every year, more than the total amount of freshwater consumed by all human activities.²

By 2025, **15–20 million hectares** of irrigated rice will experience some degree of water scarcity.³

Water supplies from inland glaciers and snow cover are projected to decline in the 21st century. Regions that depend on melt water from major mountain ranges contain **one-sixth** of the world's population – most of whom are poor.⁴

A hydropower plant can use from **15,000 to 68,000 liters** of water per megawatt hour generated. To put this into perspective, a nuclear power plant uses about 2,650 liters per megawatt hour, and coal around 1,900. Rooftop solar and wind turbines use virtually no water.⁵

By 2050, **climate change will increase extreme drought**, especially in the subtropics and low- and mid-latitudes. Increased water stress will impact land areas twice the size of those areas that will experience increased water availability.⁶

The area of hyper-arid land increased by **100%** between the 1970s and 2000s.⁷

From 1999-2008, floods affected almost **one billion** people in Asia, **28 million** in the Americas, **22 million** in Africa and **four million** in Europe.⁸

By 2080, **20% of people** will live in areas with increased flood risk.⁹

Populations of freshwater species declined by **50%** between 1970 and 2000.¹⁰

Global mean sea level is rising at a rate of 3 millimeters (mm) per year. Mangroves build **1-10 mm of soil each year**, which should enable them to adapt to rising sea levels. Mangroves help protect us against coastal hazards such as waves and storm surges. But in dammed rivers, mangroves are deprived of incoming silts and may succumb to rising seas.¹¹

Sand dams have been successfully constructed in Kenya, Ethiopia, Angola, Zimbabwe, Japan, India, Thailand, the U.S. and Brazil, benefiting **thousands of people** by providing sustainable, low-cost rainwater harvesting. In two years, the Utooni Development Organization helped to build **1,528 sand dams** in arid and semi-arid areas of Kenya's Rift Valley and eastern region.¹²

Treadle pumps use pedal power to suck water up from wells up to 7.5m deep at a rate of up to **18m³ per hour** – that's six times more water than from a traditional hand pump.¹³

NOTES

- 1 Black, M. and King, J. *The Atlas of Water: Mapping the World's Most Critical Resource*, 2nd ed. Earthscan, 2009.
- 2 McCully 2001.
- 3 Bouman, B. A. M. et al. *Water Management in Irrigated Rice: Coping with Water Scarcity*, International Rice Research Institute, 2007.
- 4 Bates, B. C. et al. (2008). "Climate Change and Water," Intergovernmental Panel on Climate Change.
- 5 Reardon, S. "Thirsty clean energy may add to water stressed world," *New Scientist*, 19 July 2013.
- 6 Bates et al. 2008
- 7 Black and King, 2009.
- 8 *Women at the Frontline of Climate Change: Gender Risks and Hopes*, United Nations Environment Programme, 2011, www.unep.org/publications/contents/pub_details_search.asp?ID=6230.
- 9 Black and King, 2009.
- 10 Ibid.
- 11 Mclvor, A. et al. (2013) "The response of mangrove soil surface elevation to sea level rise," *Natural Coastal Protection Series: Report 3*, Cambridge Coastal Research Unit Working Paper 42. Published by The Nature Conservancy and Wetlands International, www.coastalresilience.org/science/mangroves/surface-elevation-and-sea-level-rise.
- 12 Esipisu, I., "Sand dams' store water for dry season in semi-arid Kenya," *The Christian Science Monitor*, 22 February 2013.
- 13 "Irrigation," Practical Action, www.practicalaction.org/irrigation-techniques.