

The world needs to rethink the value of water

November 23 2017



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Research led by Oxford University highlights the accelerating pressure on measuring, monitoring and managing water locally and globally. A new four-part framework is proposed to value water for sustainable development to guide better policy and practice.

The value of [water](#) for people, the environment, industry, agriculture and cultures has been long-recognised, not least because achieving safely-managed drinking water is essential for human life. The scale of the investment for universal and safely-managed drinking water and sanitation is vast, with estimates around \$114B USD per year, for capital costs alone.

But there is an increasing need to re-think the value of water for a number of reasons:

1. Water is not just about sustaining life, it plays a vital role in [sustainable development](#). Water's value is evident in all of the 17 UN Sustainable Development Goals, from poverty alleviation and ending hunger, where the connection is long recognised - to sustainable cities and peace and justice, where the complex impacts of water are only now being fully appreciated.
2. Water security is a growing global concern. The negative impacts of water shortages, flooding and pollution have placed water related risks among the top 5 global threats by the World Economic Forum for several years running. In 2015, Oxford-led research on [water security](#) quantified expected losses from [water shortages](#), inadequate water supply and sanitation and flooding at approximately \$500B USD annually. Last month the World Bank demonstrated the consequences of water scarcity and shocks: the cost of a drought in cities is four times greater than a flood, and a single drought in rural Africa can ignite a chain of deprivation and poverty across generations.

Recognising these trends, there is an urgent and global opportunity to re-think the value of water, with the UN/World Bank High Level Panel on Water launching a new initiative on Valuing Water earlier this year. The growing consensus is that valuing water goes beyond monetary value or price. In order to better direct future policies and investment we need to

see valuing water as a governance challenge.

An international team led by Oxford University and partners across the world has published a new paper in *Science* in which they chart a new framework to value water for the Sustainable Development Goals. Putting a monetary value on water and capturing the cultural benefits of water are only one step. They suggest that valuing and managing water requires parallel and coordinated action across four priorities: measurement, valuation, trade-offs and capable institutions for allocating and financing water.

Lead author Dustin Garrick, University of Oxford, Smith School of Enterprise and the Environment: "Our paper responds to a global call to action: the cascading negative impacts of scarcity, shocks and inadequate water services underscore the need to value water better. There may not be any silver bullets, but there are clear steps to take. We argue that valuing water is fundamentally about navigating trade-offs. The objective of our research is to show why we need to rethink the value of water, and how to go about it, by leveraging technology, science and incentives to punch through stubborn governance barriers. Valuing water requires that we value institutions."

Co-author Richard Damania, Global Lead Economist, World Bank Water Practice: "We show that water underpins development, and that we must manage it sustainably. Multiple policies will be needed for multiple goals. Current water management policies are outdated and unsuited to addressing the water related challenges of the 21st century. Without policies to allocate finite supplies of water more efficiently, control the burgeoning demand for water and reduce wastage, water stress will intensify where water is already scarce and spread to regions of the world - with impacts on economic growth and the development of water-stressed nations."

Co-Author Erin O' Donnell, University of Melbourne:"2017 is a watershed moment for the status of rivers. Four rivers have been granted the rights and powers of legal persons, in a series of groundbreaking legal rulings that resonated across the world. This unprecedented recognition of the cultural and environmental value of rivers in law compels us to re-examine the role of rivers in society and sustainable development, and rethink our paradigms for valuing water."

More information: "Valuing water for sustainable development" *Science* (2017). [science.sciencemag.org/cgi/doi ... 1126/science.aao4942](https://science.sciencemag.org/cgi/doi/10.1126/science.aao4942)

Provided by University of Oxford

Citation: The world needs to rethink the value of water (2017, November 23) retrieved 26 April 2024 from <https://phys.org/news/2017-11-world-rethink.html>

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