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# Water Investing in natural capital



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#### List of acronyms

BAU	Business-as-usual
BRIC	Brazil, Russia, India and China
CAGR	Compound Annual Growth Rate
CEWH	Commonwealth Environmental Water Holder
ESP	Environmental Service Program
FAO	Food and Agricultural Organization of the United Nations
FSC	Forest Stewardship Council
GDP	Gross Domestic Product
IFPRI	International Food Policy Implementation
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
IWMI	International Water Management Institute
MDG	Millennium Development Goal
MENA	Middle East and North Africa
OECD	Organization for Economic Co-operation and Development
PES	Payments for Ecosystem Services
RO	Reverse osmosis
RoW	Rest of the World
TEEB	The Economics of Ecosystems and Biodiversity
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USC	Ultra-Super Critical Technology
WHO	World Health Organization

## Key messages

**1.** *Water, a basic necessity for sustaining life, goes undelivered to many of the world's poor.* Nearly 1 billion people lack access to clean drinking water; 2.6 billion lack access to improved sanitation services; and 1.4 million children under five die every year as a result of lack of access to clean water and adequate sanitation services. At the current rate of investment progress, the Millennium Development Goal for sanitation will be missed by 1 billion people, mostly in Sub-Saharan Africa and Asia.

2. The existing inadequacies in provision of water and sanitation services generate considerable social costs and economic inefficiencies. When people do not have access to water, either large amounts of their disposable income have to be spent on purchasing water from vendors or large amounts of time, in particular from women and children, have to be devoted to carting it. This erodes the capacity of the poor to engage in other activities. When sanitation services are inadequate, the costs of water-borne disease are high. Cambodia, Indonesia, the Philippines and Vietnam, for instance, together lose about US\$ 9 billion a year because of poor sanitation – or approximately 2 per cent of combined GDP. Access to reliable, clean water and adequate sanitation services for all is a foundation of a green economy.

**3.** Continuing current practices will lead to a massive and unsustainable gap between global supply and demand for water withdrawal. This is exacerbated by failure to collect and treat used water to enable subsequent uses. With no improvement in the efficiency of water use, water demand is projected to overshoot supply by 40 per cent in 20 years time. Historical levels of improvement in water productivity, as well as increases in supply (such as through the construction of dams and desalination plants as well as increased recycling) are expected to address 40 per cent of this gap, but the remaining 60 per cent needs to come from investment in infrastructure, water-policy reform and in the development of new technology. The failure of such investment or policy reform to materialise will lead to the deepening of water crises.

**4.** The availability of an adequate quantity of water, of sufficient quality, is a service provided by ecosystems. The management of, and investment in, ecosystems is therefore essential to address water security for both people and ecosystems in terms of water scarcity, the over-abundance of water (flood risk) and its quality.

**5.** Accelerated investment in water-dependent ecosystems, in water infrastructure and in water management can be expected to expedite the transition to a green economy. Modelling suggests that, under the green investment scenario, global water use can be kept within sustainable limits and all the MDGs for water achieved in 2015. With an annual investment of US\$ 198 billion on average over the next forty years, water use can be made more efficient, enabling increased agricultural, biofuel and industrial production. By 2030, the number of people living in a water-stressed region is 4 per cent less than under BAU and up to 7 per cent less by 2050.

6. When investment is coupled with improvements in institutional arrangements, entitlement and allocation system, the expansion of Payments for Ecosystem Services (PES), and the improvement of water charging and finance arrangements, the amount that needs to be invested in water can be reduced significantly. Moreover, a significant proportion of water management policies and measures in other sectors such as input subsidies are undermining opportunities to improve water management. Resolving global water supply problems is heavily dependent upon the degree to which agricultural water use can be improved. Irrigated land produces 40 per cent of the world's food and, as populations grow, a significant proportion of this water will need to be transferred to urban, commercial and industrial uses.





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