

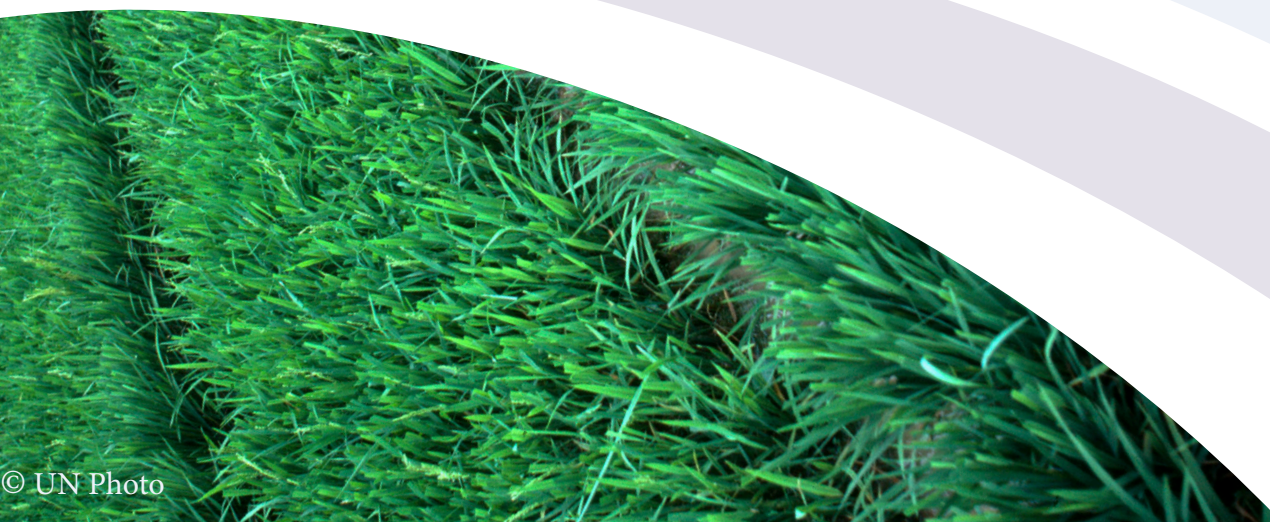


The Role of Water in the Green Economy

A perspective from the water science community

Rio+20 aspires to create “the future we want,” an epochal economic transformation to sustainable production and consumption. The international water community shares this aspiration, though it requires major innovation in the way water is managed. The fundamental requirement of the green economy is that it delivers food, water and energy security for all, a requirement challenged by climate and land-use change and its key impact—more volatile and less secure water supplies. Water security underlies all dimensions of human health and well-being, and is fundamental to both food and energy production. The green economy is inconceivable without diligent and highly efficient stewardship of this precious resource from raindrop to tap and back to raindrop.

Water is the practical entry point for integrated solutions to linked water, energy and food security challenges. Integrated Water Resources Management (IWRM) is a proven process for balancing societal, environmental and economic requirements, and provides a logical starting point for conceiving, implementing and managing the climate-resilient green economy. These points were underscored at the recent “Oxford Conference on Water Security” and the Bonn 2011 conference, “The Water, Energy and Food Security Nexus: Solutions for a Green Economy.”



"The Water-Energy-Food Security: New Challenges and New Solutions for Water Management" conference hosted by the Global Water System Project (GWSP), the International Institute for Sustainable Development (IISD) and the National Aeronautics and Space Administration (NASA) in Winnipeg, Canada, in May 2012, reinforced these key messages and pushed further on three key implications:

1 Setting water targets works, as evidenced by recent reports that the Millennium Development Goal on improved access to water has been achieved—a major and commendable accomplishment. Other key water targets related to supply, quality, use and resilience to climate change should now be established, with appropriate investments in standards and monitoring to provide systematic and coherent advice to governments on planning and management. Earth observations are crucial, increasingly low-cost and ubiquitous sources of monitoring data.

2 The flow of water does not conform to political boundaries and thus challenges conventional governance models. Innovative polycentric governance models will be key to the new partnerships necessary for water-energy-food security. Furthermore, agreements on water science and observations can often provide a basis for new partnerships that can expand to address the policy dimensions of water security. Collaborative, fully integrated water management respectful of unique cultural and historical patterns of resource tenure builds trust and is therefore a critical entry point for transboundary peace-building, and it should be prioritized.

3 The green economy is a vision for a sustainable world economy. It will likely evolve from the ground up through bioeconomies that provide renewable supplies of energy, fibre and chemicals to industry until it transforms national market economies. Innovative water management will be crucial to balance and optimize the flows of these ecosystem services and to remediate environmentally stressed regions. The Lake Winnipeg Bioeconomy Project demonstrates how innovative water management can link hydrologic and nutrient cycles, generate renewable feedstock for industry, produce ecosystem benefits and increase food security. Integrated water and land management that produces public and private benefits will be crucial for jointly mitigating and adapting to climate change—the crux of the green economy.

This is the future we need.

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