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Media advisory

New publication: An ecosystem services approach to water and food security

Edited by Eline Boelee, Thomas Chiramba and Elizabeth Khaka

Published by IWMI and UNEP

New report argues that a radical rethink of the way agriculture is currently practised could safeguard food supplies and protect the environment

How do we increase food production to feed the additional 2 billion people expected to swell the world's population in the next several decades? Many believe that we don't have a choice: we will have to sacrifice ecosystem health for food security and hope that we will find technological solutions for the resulting problems. But what if there was another way? What if, by managing agricultural areas as ecosystems—*agroecosystems*—that provide a variety of services, we could enhance their productivity and sustainability? What if, by taking a broader view of our food production systems and appreciating the connections between ecosystems, water and food, we could see opportunities to increase not just “crop per drop” but also food and other ecosystem services per drop? The research collected in this synthesis demonstrates that it is possible to feed everyone without massive and irreversible damage to our ecosystems; damage that would ultimately endanger both water and food security in the future. The knowledge is there, if only we can make the necessary changes to act on it.

Purpose of this synthesis

When thinking about food security there is a tendency to focus on increasing agricultural production and ensuring a supply of staple crops, such as wheat, maize, rice and tubers. But achieving food security is actually the product of many variables which include:

- Physical factors such as climate, soil type and water availability;
- Losses and waste along the food chain;
- Management of natural resources—water, land, aquatic resources, trees and livestock— at both the farm-level and the broader landscape level; and
- Policies in the many sectors that influence the ability of men and women to produce and purchase food, and the ability of their families to derive adequate nutrition from it.

This publication looks specifically at how an ecosystem services approach to the management of water and other natural resources can create more stable and sustainable food production and enhanced food security. It brings together the best thinking available from a number of fields to tease out the interconnections between ecosystems, water and food. Furthermore, it suggests a way forward and identifies specific ecosystem-based opportunities to increase food production in ways that make optimal use of water resources, protect the resource base, and improve the incomes and food security of poor men and women.

The main body of this publication focuses on three main areas that require change: environmental protection, water resources management and food production (agriculture, aquaculture and livestock). While one of the main messages of the publication is that we need greater coordination and collaboration among these sectors, it also acknowledges that it is largely within sectors that policies and practices will change. The report makes recommendations to guide policymakers and practitioners in ministries and departments responsible for the environment, water, agriculture, fisheries, forestry and livestock—as well as donors, international agencies and nongovernmental organizations (NGOs) investing and working in these sectors.

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The International Water Management Institute (IWMI) is a nonprofit, scientific research organization focusing on the sustainable use of land and water resources in agriculture, to benefit poor people in developing countries. IWMI's mission is "to improve the management of land and water resources for food, livelihoods and the environment." IWMI has its headquarters in Colombo, Sri Lanka, and regional offices across Asia and Africa. The Institute works in partnership with developing countries, international and national research institutes, universities and other organizations to develop tools and technologies that contribute to poverty reduction as well as food and livelihood security (www.iwmi.org).