

# The Nexus of Food, Water, and Energy



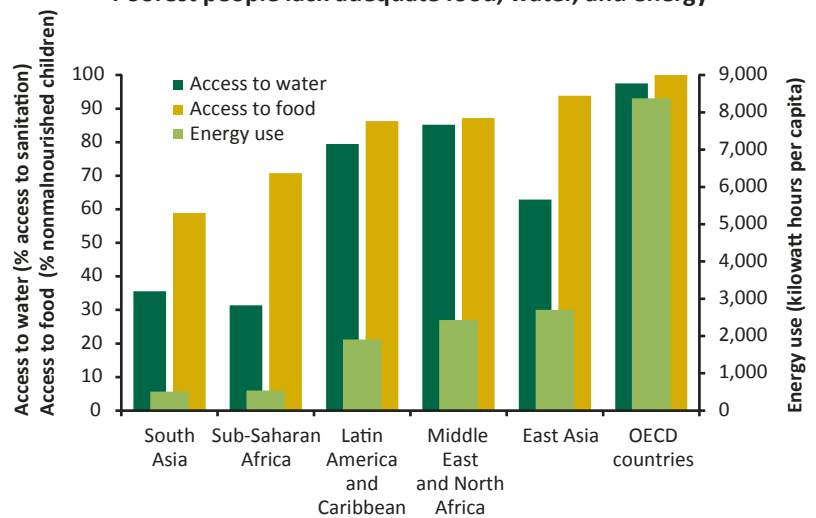
## Perspectives from IFPRI

Recent events have put food security back on the global agenda, and governments have stepped up their investments in agriculture as a way to boost productivity and protect against spikes in food prices. But because many new policies and programs fail to account for the connections among food, water, and energy, they risk using resources unsustainably—with dire consequences for food security. If current water management practices continue, for example, half of the world’s grain production will be at risk from water stress by 2050, according to research from the International Food Policy Research (IFPRI). For the past decade, food and energy prices have moved nearly in lockstep, and the projected rise in future energy prices will squeeze agriculture by raising the cost of farmers’ inputs and ramping up pressure to produce biofuels instead of food. Ultimately, the poor—who lack access to food, energy, and water—suffer first and most from the inefficient and uncoordinated management of the three sectors.

IFPRI is a strategic partner of the conference “The Water, Energy, and Food Security Nexus:

Solutions for the Green Economy,” which comes at a crucial time for global food security and provides an opportunity to develop new approaches for integrating the three sectors. Why is IFPRI involved? IFPRI’s mission—to provide policy solutions that will reduce poverty and end hunger and malnutrition—goes beyond a narrow focus on food. Protecting the livelihoods of the world’s most vulnerable people will require dealing with food, water, and energy together. To address these challenges, IFPRI conducts research on food production and trade, food and nutrition security, water, bioenergy, and climate change.

Poorest people lack adequate food, water, and energy



When policies on water, energy, and food security are developed in isolation from one another, they are inefficient and unsustainable. Strengthening the nexus of water, energy, and food security will not only make policies and programs more efficient and sustainable, but also help improve the lives and livelihoods of the poor.

SHENGGEN FAN, DIRECTOR GENERAL, INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

## Hot Topic Session Organized by IFPRI

“Emerging Country Strategies for Improving Food Security: Linkages and Trade-Offs for Water and Energy Security”

Thursday, November 17, 2011, 16:00–17:30

Food, water, and energy security are connected in important ways, and each sector has the potential to help or harm the other two. This hot topic session will include an overview of the prospects for improving food security and the implications of recent food security developments for water and energy. Panelists from developing-country regions will describe key food security initiatives and discuss implications for energy and water.

Many countries are investing in initiatives to protect against price shocks and strengthen food security, and some of these initiatives could compromise water and energy security. Despite the strong links between food, water, and energy, practitioners and policymakers continue to take a “siloed” approach to developing programs and policies. Subsidies for food, energy, or water, for example, often have unintended consequences for the other two sectors. If global food security is to be achieved, strategies, policies, and investments need to consider all three sectors. The session will conclude with some recommendations for increasing the integration of these sectors in research, policy, and actions on the ground.

## IFPRI’s Work on Food, Energy, and Water

IFPRI’s wide-ranging and cutting-edge program of research involves many facets of the global food system, including its links with energy and water. In particular, the Institute has conducted research on bioenergy, water, and climate change, as they relate to sustainable resource management and food and nutrition security.

The following are some key recent products from IFPRI researchers on these issues:

- G. Nelson, M. Rosegrant, A. Palazzo, I. Gray, C. Ingersoll, R. Robertson, S. Tokgoz, T. Zhu, T. Sulser, C. Ringler, S. Msangi, and L. You, **Food Security, Farming, and Climate Change to 2050: Scenarios, Results, and Policy Options** (Washington, DC: IFPRI, 2010).
- M. W. Rosegrant, C. Ringler, and T. Zhu, “**Water for Agriculture: Maintaining Food Security under Growing Scarcity,**” *Annual Review of Environment and Resources* 34 (2009): 205–222.
- IFPRI, **Biofuels and Food Security: Balancing Needs for Food, Feed, and Fuel** (Washington, DC: IFPRI, 2008).
- C. Ringler, **The Impact of Climate Variability and Climate Change on Water and Food Outcomes: A Framework for Analysis**, IFPRI Research Brief 15-1 (Washington, DC: IFPRI, 2008).
- **Food Security Portal** ([www.foodsecurityportal.org](http://www.foodsecurityportal.org)): An interactive website that provides up-to-date information on and analysis of emerging trends, challenges, and opportunities at all levels of the world food system, from local to national and global.



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### About IFPRI

IFPRI was established in 1975. It is one of 15 centers supported by the Consultative Group on International Agricultural Research (CGIAR), an alliance of governments, private foundations, and international and regional organizations engaged in research for sustainable development. To contribute to a world free of poverty, hunger, and malnutrition, IFPRI conducts research on a wide range of topics, including agricultural productivity, global trade and local markets, maternal and early childhood nutrition, climate change, and individual country development strategies, among others. IFPRI has 12 offices worldwide including in Ethiopia, India, Senegal, and the United States. IFPRI gratefully acknowledges the generous unrestricted funding from Australia, Canada, China, Denmark, Finland, France, Germany, India, Ireland, Netherlands, Norway, South Africa, Sweden, Switzerland, United Kingdom, United States, and the World Bank.