

The global population is expected to increase from 7 billion to about 9 billion by 2050, increasing the requirements for both food and water. The demand for water for human consumption and industrial needs, as well as standards of living, will also rise in the 21st Century. Agriculture is facing a harsh reality of a battle for water between farmers and the growing urban population. Land and water resources need to be used much more efficiently. The agricultural community has to be much more proactive in managing its demand for water for production needs. Agriculture has to shoulder a much broader responsibility in its water use, which includes protecting human health and the environment. Unless major changes occur, food shortages, famine, and hunger will still be the way of life for a portion of the world's population in the next century. However, changing climate and increasing frequencies of natural hazards threaten the security of both water and agricultural resources. Since most of the world's poor are directly dependent on both natural and managed ecosystems for food, they are the most vulnerable to environmental degradation and climate-related extreme shocks. Food and water security are global inter-connected issues, however. There is world-wide recognition of the problems and issues that need to be addressed. It is a global problem that would benefit from a collective framework of potential training and research collaborations to provide guidance for local solutions.

The International Symposium on Synergistic Approaches to Food and Water Security plans to bring together international experts and decision makers to share information on international and institutional perspectives on food and water security, the application of science and technology to both food and water security, the fundamental importance of environment and eco-systems to sustainable food and water security, and, key information needs of the decision maker. This symposium will present significant outcomes and discuss future plans of action for a global collaboration.

## October 18, 2012

### Session 3 (Plenary 2) -- International Perspectives on Food and Water Security, Chair: Federica Rossi

Time	Speaker	Title
08:30		<a href="#">Hydrological Information and Forecasting in China</a>
08:55	Sue Walker	<a href="#">Perspectives on Food and Water Security in South Africa</a>
09:20	Mannava V.K. Sivakumar	<a href="#">Promoting Research and Excellence in Agricultural Meteorology for Global Food and Water Security</a>
09:45	Kamalesh Kumar Singh	<a href="#">Perspectives of Agricultural Sustainability and Food Security in India</a>
10:10	Zhiqiu Gao	<a href="#">Asymmetric and heterogeneous frequency of in high and low record breaking temperatures in China during past and future half century</a>
		Coffee Break
10:40	Kwang-Soo Kim	<a href="#">Pending Issues on Food Security in the Korean Peninsula</a>
11:05	Orivaldo Brunini	<a href="#">Crop Zoning to Support Food and Water Security in a Changing Climate Regime</a>
11:30	Roger Stone	<a href="#">Perspectives on Food and Water Security in Australia</a>
11:55	Simone Orlandini	<a href="#">Water and Food Security in Europe: Current Situation and Future Perspectives</a>

12:30		Lunch
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**Session 4 (Plenary 3) -- Institutional Perspectives on Food and Water Security, Chair:  
Al Powell**

<b>Time</b>	<b>Speaker</b>	<b>Title</b>
14:00	Robert Stefanski	<a href="#">WMO Perspectives on Food and Water Security</a>
14:20	Federica Rossi	<a href="#">Federica Rossi, WMO: INSAM and WAMIS: Tools for Food and Water Security Applications</a>
14:40	Keith Ingram	<a href="#">SECC Perspectives on Food and Water Security</a>