



## Training Institute on Adaptive Water-Energy Management in the Arid Americas

June 24 - July 3, 2013 – La Serena, Chile

<http://iaibr3.iai.int/twiki/bin/view/PasiWaterEnergy2013/>

With support from the U.S. National Science Foundation's Pan-American Advanced Studies Institutes, this training will be conducted under the auspices of the AQUASEC Center of Excellence for Water Security. AQUASEC is a collaborative initiative of the University of Arizona, Inter-American Institute for Global Change Research, Pontifical Catholic University of Chile, Water Center for Arid and Semiarid Zones of Latin America and the Caribbean, Stockholm Environment Institute, and the International Hydrology Program of UNESCO, among others.

### What?

Advanced conceptual and practical training by international experts in the use and adoption of tools to address linkages between water resources and conventional and non-conventional energy, and interdisciplinary physical and social science approaches to water and energy joint management. The Water Evaluation and Planning System (WEAP) and Long-range Energy Alternatives Planning (LEAP) models will be used to strengthen diagnostic skills and support integrated policy and co-management of water and energy.



### Why?

- Development of freshwater and energy – essential for quality of life – can threaten ecosystem processes and alter water, carbon, and energy cycles
- Increasing pressure on water resources in arid regions, especially for electrical power generation, is exacerbated by climate change and hydroclimatic variability
- Population growth, urbanization, increasing needs for irrigation water intensify energy dependence and heighten societal vulnerability
- Mutual linkages between energy and water offer potent tools for adaptation to global change.

### Who?

25 participants from U.S. or Latin American institutions including: 1) post-doctoral scientists and advanced graduate students; 2) early-career professionals from water resources, energy, environment, urban and related agencies and non-governmental organizations; 3) early-career practitioners from decision-making bodies (water and energy regulators, ministries, and users associations).

**Objectives:** Strengthen water and energy security through joint management in the context of adaption to global change in the Arid Americas. Specifically: 1) provide participants with tools to evaluate potential impacts of energy development on water resources and energy demands associated with water use; 2) integrate hydrological, climatic, social and economic development analyses; 3) enhance management options for energy and water sectors; 4) promote the use of decision-making tools in the management of water and energy under conditions of uncertainty; and 5) develop a regional knowledge network of experts in joint energy-water management.



**Content:** 1) Integrate new understandings of the water-energy nexus and its impacts on vulnerable arid and semiarid environments of the Americas; 2) strengthen water-energy security by addressing the challenges of resource scarcity and over-allocation; 3) develop adaptive scenario planning for resources tied to rural and urban economic development with multiple social priorities; 4) assess impacts over short to long time frames and local to regional scales; 5) enhance governance through assessment of the role of different actors (public, private and social sectors, international organizations) to support decision making. The program (lectures, hands-on exercises, field trip) will be carried out primarily in English with significant content in Spanish. Therefore, applicants should demonstrate proficiency in both languages in order to understand, communicate, and participate in all activities.

**Application process:** Applications are due no later than Thursday, January 31, 2013 at 12:00 noon U.S. Mountain Daylight Time (17:00 PM São Paulo, Brazil) and must be submitted on line at the following link (which lists all requirements):

<http://iaibr1.iai.int/TrainingOpportunities/PASiWaterEnergy2013TI/>