

RE-THINKING PARADIGMS: WATER AND FOOD SECURITY

4th Marcelino Botín Foundation Water Workshop

Santander (Spain), 22–24 September 2009

Between the 22 to the 25th September, the Marcelino Botin Foundation hosted the 4th Marcelino Botin Water Workshop. This is the last of a series of seminars which take place in Santander every two years. These Seminars, led by the Director of the FMB-Water Observatory, Professor Ramon Llamas, focus on global water issues. Experts from all over the world met over three days to discuss these issues, on this occasion looking at re-thinking water and food security.

The 4th FMB Water Workshop hosted 24 experts from eleven different countries (Canada, China, Sweden, Tunisia, Egypt, Nepal, UK, Spain, India and Holland), to debate key issues like the increased relevance of green water, the relationship between climate change and water resources, the nexus on water and energy, desalination, the water demand of ecosystems, groundwater intensive use and particularly, the water footprint and virtual water trade. It placed special emphasis on the “extended water footprint”, where the FMB-Water Observatory is leading the way in integrating economic and environmental aspects to the hydrological aspects of the water footprint analysis.

The presentations will be edited into a book, which had amongst these, presentations by Margaret Catley-Carlson, current Chair of the *World Economic Forum, Global Agenda Council on Water*), professor Tony Allan, Stockholm Water Prize winner 2008 y professor Malin Falkenmark, from SIWI. The meeting welcomed people from a range of perspectives, including business, policy circles, non-governmental organizations and academia. The group discussed and debated the interaction between science and policy, presenting new data in relation to water and food security. The Seminar is clearly in line with the vision of the Water Observatory, which in the words of Federico Ysart, Director of the FMB Trends Observatory, (host of the Water Observatory), aims to create an arena for debate and discussion at high level.

4to seminario de Aguas: Seguridad Hídrica y alimentaria a nivel global

Los días 22, 23 y 24 de Septiembre del 2009, la Fundación Botín celebró el 4to Seminario de Aguas, una serie de seminarios de reconocido prestigio internacional, que se llevan celebrando cada dos años aproximadamente en Santander. Estos Seminarios liderados por el Director del Observatorio del Agua el catedrático Ramón Llamas, se identifican temas de interés mundial, donde los mejores expertos en el tema se reúnen para hablar y reflexionar en profundidad durante los tres días sobre en este ocasión el tema de la seguridad hídrica y alimentaria a nivel mundial.

El 4to seminario contó con la presencia de 24 expertos de once países diferentes (Canadá, China, Suecia, Dinamarca, Túnez, Egipto, Nepal, Reino Unido, España, India e Holanda) que se

reunieron para debatir temas, como el concepto de seguridad alimentaria, la creciente importancia del agua verde, la inter-relación entre cambio climático y recursos hídricos, las necesidades hídricas de los ecosistemas, desalinización, aguas subterráneas y los patrones de consumo y producción en relación a los recursos hídricos mundiales.

Las ponencias de estos seminarios se publicarán eventualmente en un plazo de 1 año aproximadamente, en un libro. Este último seminario que se acaba de clausurar, puso especial énfasis en el tema de seguridad hídrica y alimentaria, poniendo particular énfasis en la huella hídrica productiva (extended water footprint), donde el Observatorio del Agua, de la FMB está realizando un proyecto de impacto a nivel mundial.

Los expertos, entre los cuales se encontraban Margaret Catley-Carlson, actual Chair, del Consejo del Agua del Foro Económico Mundial (World Economic Forum, Global Agenda Council on Water), el catedrático Tony Allan, premios de Agua de Estocolmo del 2008 y Malin Falkenmark, del Stockholm International Water Institute. Los asistentes incluían un grupo que recogía expertos del mundo corporativo, del mundo político, de las ONGs, y del mundo académico y de investigación a nivel mundial. Este grupo presentaron y debatieron sobre la inter-acción entre política y ciencia, presentó nuevos datos referentes a los temas sobre seguridad hídrica y alimentaria, y reflexionaron sobre los desafíos más apremiantes en estos temas. Esta actividad se enfoca claramente dentro de la visión del Observatorio del Agua, que en palabras de Federico Ysart, Director del Observatorio de Tendencias de la FMB intenta, no necesariamente ofrecer soluciones prescriptivas, sino mas bien crear un importante foro de debate enfocado a la problemática del agua a nivel mundial.

PPT Presentations from the 4th Botin Foundation Water Workshop 22-25 September 2009

THEME A: WHAT DOES WATER AND FOOD SECURITY MEAN TODAY

[Pdf 1.](#) The Impossibilities of Water in Agriculture: An Increasingly Unreal World: What WE have to do about it. *M. Catley-Carlsson (Global Water Partnership. Former President. Canadian International Development Agency, Canada)*

[Pdf 2.](#) Water for a Starving world: time to grasp the 1977 warning *Malin Falkenmark (SIWI, Sweden)*

THEME B. GLOBAL TRADE AND VIRTUAL WATER TRADE

[Pdf 3.](#) Re-thinking water and food security paradigms: can science and technology help change global water policy frameworks? *R. Llamas and E. Lopez-Gunn (MBF Water Observatory, Spain)*

[Pdf 4.](#) Global agricultural green and blue water consumptive uses and virtual water trade. *Hong Yang (Swiss Federal Institute of Technology, Zürich, Switzerland)*

[Pdf 5.](#) How to harmonize virtual water trade and future water management and policy dialogue. *Karen G. Vilholth (GEUS, Denmark)*

[Pdf 6.](#) Economic aspects of virtual water trade: lessons from the Spanish case. *Alberto Garrido (Polytechnic University of Madrid and MBF Water Observatory, Spain)*

[Pdf 7.](#) Water Scarcity and Food Security: a global assessment of water potentiality in Tunisia. *Jamel Chahed (ENIT, Tunisia)*

[Pdf 8.](#) Revisiting the present and future roles of water and food trade in achieving food security, reducing poverty and water use in the Mediterranean region (Part 1). *Juan Antonio Sagardoy (Istituto Agronomico de Bari; formerly FAO)*

[Pdf 9.](#) Revisiting the present and future roles of water and food trade in achieving food security, reducing poverty and water use in the Mediterranean region (Part 2). *Consuelo Varela-Ortega (Polytechnic University of Madrid, Spain)*

THEME C. GLOBAL SUSTAINABLE PRODUCTION AND CONSUMPTION

[Pdf 10.](#) Water Commoditization: An Ethical Perspective for a Sustainable Use and Management of Water Resources, With Special Reference to the Arab Region. *Magdy Hefni (Regional Center for Research and Studies of Water Use Ethics, Ministry of Water Resources and Irrigation)*

[Pdf 11.](#) The role of consumption behaviour in determining water and food demand. *Tony Allan (King's College and SOAS)*

[Pdf 12.](#) Water in the food and value chain – increasing the beneficial use of water. *Jan Lundqvist (SIWI, Sweden)*

[Pdf 13.](#) Private sector engagement in water: water footprints and policy. *Stuart Orr (WWF-International)*

THEME D. WATER FOOTPRINT CASE STUDIES

[Pdf 14.](#) Water quality and Non-point pollution: comparative global analysis. *José Albiac (Agrifood Research and Technology Centre, Government of Aragon, Spain)*

[Pdf 15.](#) Improved water management through the water footprint: incorporating the environmental water requirements into practice: water footprint analysis of the Doñana national park. *M. M. Aldaya (University of Twente, Holland)*

THEME E. THE ROLE OF GROUNDWATER SILENT REVOLUTION IN WATER AND FOOD SECURITY

[Pdf 16.](#) Managing externalities of groundwater use through electricity reforms: Evidence from three states in India. *Aditi Mukherji (IWMI, Sri Lanka)*

[Pdf 17.](#) Intensive groundwater development: a water cycle transformation, a social revolution and a management challenge. *Emilio Custodio (UPC, Spain) and Luis Martinez Cortina (IGME, Spain)*

THEME F. WATER, ENERGY AND 'NEW' WATER TECHNOLOGIES

[Pdf 18.](#) Consuming rice is water intensive, but are the impacts that severe? *A. Chapagain (WWF-UK)*

[Pdf 19.](#) General trends on costs for desalination of sea water. *AGBAR, Spain*

[Pdf 20.](#) Water and Energy nexus- the role of technology. *J. Cramwinckel (Shell, Holland)*

[Pdf 21.](#) The foreseeable energy supply for the coming decades and its water demand. *I. Nieto (Former Secretary of State for Energy of Spain, Spain)*