

WORKSHOP

Addressing our Emerging Water Futures: The Water-Food-Energy-Ecosystems Security Nexus

18th September 2015

CNR - Area della Ricerca, via Alfonso Corti 12, Milano

19th September 2015

EU Pavilion venue at EXPO Milano 2015



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JOINT RESEARCH CENTRE



The 2030 HUNGER CHALLENGE: sustainable world



United Nations Educational, Scientific and Cultural Organization



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Venice
Office



Workshop

Addressing our Emerging Water Futures: The Water-Food-Energy-Ecosystems Security Nexus

18th September 2015 (CNR venue, Milano)

19th September 2015 (EU-Pavilion at the EXPO site, Milano)

RATIONALE AND OBJECTIVES

Changes in climate, population growth, urbanization, economic development and land use are projected to cause water security issues in all countries and continents, with increased competition for scarce water resources, constraints on socio-economic development and inequality of access to water resources. With agriculture as major water using sector (ca. 70% worldwide) and projections for 2050 when 60% of extra food will need to be produced to feed a population of 9 -10 billion people, water will become more and more key to food security.

Water crises might be among the major global risks to social stability that the world are the least prepared for. Mitigating risks to long-term water security requires designing resilience strategies and solutions going beyond sectoral divides and matching the needs of water from different users in a region. Governance of interconnected solutions is then at the core of the Water-Food-Energy-Ecosystem Nexus. Managing the Nexus requires solutions focusing on equitable allocation of water across all economic sectors including an appropriate appreciation of the role of ecosystems as elements of the capital assets that support the water sector. As integration is not a new concept in water management, how do we make a difference in integrating approaches by adopting a Water Nexus perspective?

The workshop, organised by the CNR-Consiglio Nazionale delle Ricerche, the JRC-Joint Research Centre of the European Commission, the FAO-Food and Agriculture Organization, and UNESCO-United Nations Educational, Scientific and Cultural Organization, will address interconnected solutions for a Nexus governance of water resources. It will be organised in two steps. The first day will have a scientific focus. This scientific event will be followed by a shorter event for the general public and the press where the main outputs of the meeting will be streamlined and released to policy-makers and stakeholders.

The workshop is planned to complement numerous specific events covering the problem of water scarcity for agriculture and the humanity at EXPO (spanning June 2015 in the EU and Italian pavilions, hence the selected date and locations). The event will help raise awareness and increase knowledge

with the aim of implementing best sustainable practices when dealing with the problem of water, food and energy. The event will bring together participants from Europe and beyond, including components from science, industry, policy and the civil society.

The first day of the workshop will feature four sessions:

1. **The challenge of decentralised governance:** This session will bridge policy and science and discuss how trade-offs for water allocation are negotiated across scales.
2. **Investing in human and social infrastructure:** This session will make the case for placing people at the centre of the Nexus, as the requirements of social transformation need to go hand in hand with what policy, science and technology can bring.
3. **Enrolling technologies in the Nexus:** This session will identify best practices and technologies, including bio-technologies and agro-technologies that can create opportunities for strengthening the Nexus, and for bio-economy growth and farming stability.
4. **Allowing transition to practice:** A role playing game to analyse interactions between actors in the nexus between food, ecosystem services and water management.

The format adopted will include a few lectures released by key speakers who lead the fields. At the end of each lecture, a panel featuring prominent personalities from social and political fields will highlight possible consequences and interactions of the proposed approach on the Nexus, and overall benefits/costs of presented innovations at local, regional and global level. The debate will follow up with participation of the entire audience, also through streaming, via twitters or other media.

The second day an event for the general public and the press will be held at the EU Pavilion at the EXPO site. Moderated by a renowned scientific communicator, key participants of the previous day event will release an overview of the problem as analysed from the Nexus viewpoint and a series of testable best practices and recommendations, to lead policies toward sustainable use of water for food and energy production and for ecosystem stability. The conclusions will be debated with the public and will be collected in an opinion paper to be released to stakeholders and the scientific community.

For online registration please go to

<https://web.jrc.ec.europa.eu/rem>

Timeline for registration 6th September 2015

Venue of the Workshop

The first day, the Workshop will take place in the Sala Convegni of the CNR Research Area MI1, which is located in Via Alfonso Corti 12, Milano, in the so called area "Città Studi". The event of the second day will take place at the EU Pavilion at EXPO. No registration fee is foreseen for participation in the 2-day event, and the European Commission will offer the entrance ticket to the EXPO site on 19th September 2015. A confirmation will be sent to participants at the latest by 8th September 2015.

About CNR: www.cnr.it, www.daa.cnr.it

The Consiglio Nazionale delle Ricerche (CNR) is the Italian Governmental Research Organisation and one of the European leading research institutions. The Department of Biology, Agriculture and Food Sciences (CNR-DISBA), directed by Dr Francesco Loreto, includes 9 Institutes and more than 600 researchers working on different aspects of agriculture and food sciences, with the overall goal of increasing sustainability of agriculture, providing food, water and energy for people, now and in the future.

About EC-JRC: <https://ec.europa.eu/jrc/>

As the in-house science service of the European Commission, the JRC-Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle. In this context, the JRC provides scientific assessments to address societal and economic challenges deriving from the evolving vulnerability of the European and global water environment. It supports several pieces of water-related legislation including the Water Framework Directive (WFD) and associated daughter Directives, and develops modelling tools to predict climate change impacts on water, assesses water governance in developing countries and carries out studies on the preservation of ecosystems.

About FAO: www.fao.org/nr/water/

Achieving food security for all is at the heart of FAO-Food Agriculture Organization's efforts – to make sure people have regular access to enough high-quality food to lead active, healthy lives. FAO's three main goals are: the eradication of hunger, food insecurity and malnutrition; the elimination of poverty and the driving forward of economic and social progress for all; and, the sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources for the benefit of present and future generations.

About UNESCO: www.unesco.org/

As a specialized agency of the United Nations, UNESCO contributes to the building of peace through education, science, culture, communication and information. Freshwater scarcity ranks among the most urgent environmental challenges that require international cooperation. UNESCO plays a central role in gathering and disseminating information on freshwater at global level. The International Hydrological Programme (IHP) of UNESCO is an intergovernmental programme with the mandate to promote science, innovation, policies and the development of capacities related to the management of the hydrological cycle, including its societal component. To this end, IHP: (a) mobilizes scientific and innovation networks; (b) strengthens the interface between scientists and decision makers; and (c) develops institutional and human capacities. Currently, at its VII Phase, IHP focusses on Water Security: Addressing challenges at the global, regional and local level. To implement the programme, UNESCO-IHP relies on an extensive network of more than 1500 experts coming from the UNESCO specialised staff based in Paris or field offices, 169 IHP National Committees, the UNESCO-IHE Institute for Water Education in the Netherlands, the World Water Assessment Programme located in Italy, 28 regional and international Category 2 centres under the auspices of UNESCO and 35 UNESCO Water Chairs.

Draft Agenda

18 th September 2015, CNR venue, Milano	
08:30-09:00	<i>Registration</i>
09:00-09:30	Launching the Workshop
09:30-11:00	<p>The challenge of decentralized governance This first session will bridge policy and science and discuss how trade-offs for water allocation and multi-functional usage are negotiated across scales. It will make the cases for an analysis of governance issues at local, national and global levels with examples from Asia, Africa, Latin America and Europe. It will deal with the ability of institutions to address water use through different sectors and design policies that are socially acceptable and able to regulate use rivalries.</p> <p>Chair: Giovanni Bidoglio, Joint Research Centre, European Commission</p> <p>Introductory speaker: Dipak Gyawali, Nepal Academy of Science and Technology-NAST and research director of the Nepal Water Conservation Foundation, Kathmandu, Nepal</p> <p>Panelists</p> <ul style="list-style-type: none"> • Bai Mass Taal, Executive Secretary of AMCOW- African Ministers' Council on Water, Abuja, Nigeria • Andres Rodriguez Allende, Dirección de Conservación y Protección de los Recursos Hídricos, Subsecretaria de Recursos Hidricos de la Nacion, Buenos Aires, Argentina • Dejan Komatina, Secretary of the International Sava River Basin Commission-ISRBC, Zagreb, Croatia • Almut Nagel, Federal Ministry for the Environment, Bonn, Germany
11:00-11:30	<i>Coffee break</i>
11:30-13:00	<p>Investing in human and social infrastructure This session will make the case for placing people at the centre of the Nexus, as the requirements of social transformation need to go hand in hand with what policy, science and technology can bring. It will address the need to shift from a narrow focus approach sharing water quantities towards a broader vision of sharing benefits taking into account of specific features of local geography, ecology, economies and culture.</p> <p>Chair: Jippe Hoogeveen, Food and Agricultural Organisation, Water Resources Division</p> <p>Introductory speaker: Jan Lundqvist, Stockholm International Water Institute - SIWI, Stockholm, Sweden</p> <p>Panelists</p> <ul style="list-style-type: none"> • Margaret Nakato, Katosi Women Development Trust-KWDT, Kampala, Uganda • Bijan Kafi, SEKEM Group & SEKEM Development Foundation, Cairo-Egypt and Berlin-Germany • Anna Fruttero, The World Bank, Washington DC, USA • Asma Bachikh, World Youth Parliament for Water, Montreal, Canada

13:00-14:00	<i>Lunch</i>
14:00-15:30	<p>Enrolling technologies in the Nexus</p> <p>This session will identify best practices and technologies, including bio-technologies and agro-technologies that can create opportunities for strengthening the Nexus, and for bio-economy growth and farming stability. These technologies are at various stages of research and deployment. The session will address research avenues, performance targets, siting considerations and potential synergies for technologies that span multiple applications across water-using sectors.</p> <p>Chair: Franco Miglietta, Consiglio Nazionale delle Ricerche, IBIMET, Firenze, Italy</p> <p>Introductory speaker: Charlie Paton, Seawater Greenhouse, UK</p> <p>Panelists</p> <ul style="list-style-type: none"> • Shabtai Cohen, Volcani Center, Israel • Claudio Bogliotti, International Centre for Advanced Mediterranean Agronomic Studies, Mediterranean Agronomic Institute of Bari- CIHEAM – IAMB, Italy • Philippe Ker Rault, Alterra Wageningen University and Research, Wageningen, NL • Alfredo Cassano, Consiglio Nazionale delle Ricerche, ITM, Rende, Italy
15:30-16:00	<i>Coffee break</i>
16:00-17:30	<p>Allowing transition to practice</p> <p>People in the audience will form groups and play the “Water Nexus” role playing game to analyse the interactions between actors in the nexus between food, ecosystem services and water management. In this highly interactive session, participants will firstly play the Blue River role simulation game. The game contains a real-world problem on the water-ecosystem-food nexus that should be solved through a simulated negotiation between different roles. Participants will experience the role of different perspectives, interests and knowledge in the negotiation, which is very close to reality. In the second part of the session we will extract lessons learned related to (decentralized) governance challenges and social infrastructures.</p> <p>Chair: Philippe Pypaert, UNESCO Regional Bureau for Science and Culture in Europe, Venice, Italy</p> <p>Game facilitators: The game will be facilitated by the following scientists from TNO - Netherlands Organisation for Applied Scientific Research, NL:</p> <ul style="list-style-type: none"> • Adriaan Slob • Geiske Bouma • Tara Geerdink
17:30-18:00	Synthesis from panels and closing remarks

19th September 2015, EXPO venue – EU Pavilion, Milano

11:00-13:30	<p>Building relationships</p> <p>The panel discussions in this session to be held at the EU Pavilion at the EXPO site are targeting the general public and the press. As part of the storytelling, panelists will deliver an overview of the Water Nexus challenge for society and economy and of best practices and recommendations toward sustainable use of water for food and energy production and for ecosystem stability.</p> <p>Moderator: A science journalist</p> <p>Panel 1</p> <ul style="list-style-type: none"> • Bai Mass Taal, Executive Secretary of AMCOW- African Ministers' Council on Water, Abuja, Nigeria • Roberto Ridolfi, Director, EC Directorate General International Cooperation and Development • Charlie Paton, Seawater Greenhouse, UK • Asma Bachikh, World Youth Parliament for Water, Montreal, Canada • ... <p>Panel 2</p> <ul style="list-style-type: none"> • Dipak Gyawali, Nepal Academy of Science and Technology-NAST and research director of the Nepal Water Conservation Foundation, Kathmandu, Nepal • Margaret Nakato, Katosi Women Development Trust-KWDT, Kampala, Uganda • Andres Rodriguez Allende, Dirección de Conservación y Protección de los Recursos Hídricos, Subsecretaria de Recursos Hidricos de la Nacion, Buenos Aires, Argentina • Claudio Bogliotti, International Centre for Advanced Mediterranean Agronomic Studies, Mediterranean Agronomic Institute of Bari- CIHEAM – IAMB, Italy • Jan Lundqvist, Stockholm International Water Institute - SIWI, Stockholm, Sweden • ... <p>Public debate and closing remarks</p> <p>Free time at EXPO</p>
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