

# USE SWAN eNEWSLETTER

Latest news on University of Seville' SWAN team

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*The twitter account @waterP2P has been created in order to promote the dissemination on Data, Information and Knowledge for Water Governance in the Networked Society*



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*The research leading to these results has received funding from the European Community's Seventh Framework Programme FP7/2007-2013 under grant agreement n° 294947 FP7-INCO-2011-7*

## Introduction: Networking and collaboration in SWAN Project

The 2013-2014 academic year was a busy period for the USE SWAN team. Several members of the team spent time conducting research at the University of Arizona in Tucson. Their main achievements are presented in section 2.

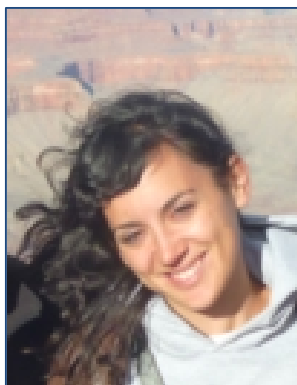
The USE SWAN team, in collaboration with other members of the SWAN partnership, organized the [International Conference on Data, Information and Knowledge for Water Governance in the Networked Society](#) in Seville from June 9th-11th, 2014. The goal of the Conference was to analyze the current debates and innovations on the issues surrounding the collaborative generation, processing and dissemination of data, information and knowledge for the management of natural resources in general and water resources in particular.

The background of the International Conference dates back to a Workshop on [New paradigms in water resources and risks management: Key water data and information for sustainability](#), organized by the USE SWAN Team on January 25, 2013. Preliminary conclusions were discussed and enriched with contributions from seminar participants and other SWAN team members and are available as a Technical Report submitted to the European Commission entitled [Key Data and Information Requirements in the Context of Current Debates on Water Management](#). The relevance and interest of the topics discussed in this Workshop encouraged us to open up the debate to a wider international audience and undertake a more ambitious activity.

Complementing the organization of the International Conference, we launched a special issue on [Information and Knowledge for Water Governance in the Networked Society](#) in the journal **Water Alternatives**. We also launched a twitter account [@waterP2P](#) in order to disseminate conference results and serve as a node for discussions about these topics on twitter.

The topics discussed during the Conference carried over to the [4th SWAN Progress Meeting](#) that took place immediately following the conference on June 12-13. The Progress Meeting served to present scientific progress by the different SWAN teams, further develop the collaborative work on the Tucson Basin Case Study, and promote interrelationships, partnerships and synergies between project members.

## USE Research stays in the UMI



**Natalia Limones Rodríguez** works at the University of Seville since 2007. She defended her doctoral dissertation titled: "Hydrological drought in the Spanish Mediterranean domain. Proposal of implementation of the IESP index on runoff datasets" in June 2013.

### Research stay of Dr. Natalia Limones

*January 2014 – March 2014*

Dr. Natalia Limones conducted a three-month research stay at the University of Arizona in Tucson between January and March of 2014. The stay allowed her to advance along different lines of interdisciplinary collaboration with other SWAN members. Most significantly, she was able to:

- ▶ Develop papers based on her doctoral dissertation about hydrological drought modeling.
- ▶ Collaborate with Dr. Aleix Serrat-Capdevilla (University of Arizona) to apply the IESP drought index to rainfall in Africa. They are working on a joint paper focused on developing a proper rainfall database anchoring near real-time products with historical long term datasets.
- ▶ Participate in weekly SWAN meetings that led to the development of a transdisciplinary research proposal in collaboration with Dr. Murielle Courderoy (UMI-CNRS) and Owen King (UWE) on the *Tucson Basin Case Study (TBCS)*. Specifically, she will study groundwater in the TBCS region and its use for mining, analyzing the groundwater metabolism (flows and their context) of the Tucson (Rosemont) copper mines.

Dr. Limones will be returning to Tucson for an additional two month research stay in the fall of 2014.

### Jumpstarting the work with stakeholders in the Tucson Basin Case Study

In November 2013 and in the context of SWAN's 2nd Progress Meeting held at the University of Arizona in Tucson, Nuria Hernández-Mora and Violeta Cabello (University of Seville) collaborated with Dr. Aleix Serrat-Capdevila in the organization of a Stakeholder workshop to identify research priorities for the Tucson Basin Case Study. As a result of that process they will be working on an institutional, hydrological and environmental analysis of the groundwater banking system in collaboration with local stakeholders. The paper aims to answer the following question: "Which are main uncertainties and potential impacts of the water banking system on the present and future dynamics of water use and biodiversity in the Tucson Basin?" This paper complements Nuria's current research on water markets in Spain and Violeta's doctoral dissertation work on water metabolism. In November 2014 they will both return to Tucson to participate in the SWAN 4th Progress Meeting to continue their work.

Additionally, Violeta and Nuria are collaborating with Dr. Leandro del Moral (University of Seville) and Dr. Lucia de Stefano (Universidad Complutense) on a paper on a paper entitled: "Information and communication technologies for open water governance: Potential for transformation of existing power structures for water management in Spain" to be published in the upcoming Special Issue of the journal *Water Alternatives* (see below).



**Nuria Hernández-Mora** is a member of the University of Seville SWAN research team since January 2013. She is an Economist specializing in water governance and water policy analysis.

## International Conference on Data, Information and Knowledge for Water Governance in the Networked Society (#WaterP2P14)

The Conference was organized around four thematic sessions. The first two were highly theoretical and reflexive, while the last two aimed to present innovative practices and real operational-technological applications in the world of collaborative information for natural resources management, always within a relevant theoretical framework. Below is a description of the goal and content of each session. Video recordings of all the sessions as well as the supporting materials for each presentation can be found at: <https://swanproject.arizona.edu/international-conferences>

### ] Session 1. POWER, COMMUNICATION AND THE POLICY PROCESS

The purpose of the first session was to reflect on the current political, historical and socio-economic context that frames the radical changes occurring in the world of information and knowledge affecting political decision processes in general and discussions on water policy paradigms in particular. It is important to discuss the key theoretical and political issues (the current traits of power, the neoliberal globalization, the post-political age, post-democracy, etc.) that are determining the needs, the strengths and the limitations of the instruments of the 'networked society'.



#### A. Political and Technological Innovation. P2P Democracy and policy co-production.

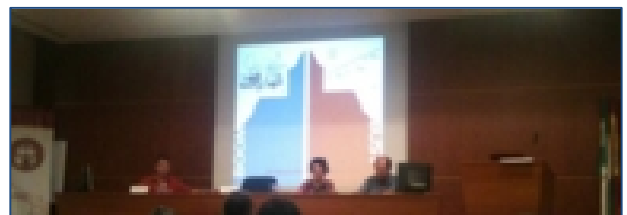
**Joan Subirats**; Autonomous University of Barcelona, Spain.

#### B. Interrogating Post-Democracy: Reclaiming egalitarian political spaces.

**Erik Swyngedouw**; Manchester University, United Kingdom.

### ] Session 2. KEY DEBATES ON WATER MANAGEMENT MODELS

The session focused on the debates about current and emerging paradigms of water resources management. It included a critical reflection on the limitations, contradictions and conflicts found in the practical applications of the IWRM paradigm. The session aimed to include different lines of reflection: critical discourses about the ideas surrounding 'nirvana concepts' and 'panaceas'; analysis of the relationships between water governance and the global socio-economic and political processes; and emerging alternative (or complementary) proposals such as ecosystem management, polycentric management or eco-adaptive management of water.



#### A. From panaceas towards a diagnostic approach in water governance and management.

**Claudia Pahl-Wostl**; Institute of Environmental Systems Research, University of Osnabrück, Germany.

#### B. Water management models and the formation of policy bubbles.

**François Molle**; Institute for Research and Development (IRD, France) & International Water Management Institute (IWMI, Egypt).

#### C. The river basin organization, reflections on politics and performance.

**Dave Huitema**; VU University-Amsterdam, The Netherlands.

#### D. Learning to swim in the troubled waters of impure public goods.

**Bernard Barraque**; International Center for Scientific Research on Environment (CNRS AU CIRED – HDR, France).

### ] Session 3. POLYCENTRIC INFORMATION FOR WATER GOVERNANCE: GENERATION, QUALITY CONTROL AND SUSTAINABILITY

This session focused on new practices of collaborative and distributed generation of data prompted by the New ICTs in the era of the networked society, and to their potential for meeting the information needs for water management. Particular attention was paid to data and information quality control, which must ensure the consistency of information on water throughout its life cycle, despite the complexity and diversity of the sources that a networked society offers. The issue of information sustainability was also addressed. This implies ensuring its free access, optimizing generation efforts and minimizing overlaps.



- A. Socially networked citizen science as a mechanism for supporting conservation and behavioral change.**  
*Janice Dickinson*; Professor of Natural Resources and Director of Citizen Science at the Cornell Lab of Ornithology, Cornell University.
- B. Processes of social participation in information: The experience of the Water Remunicipalization Tracker.** *Satoko Kishimoto*; Transnational Institute, Water Justice Project Coordinator.
- C. Public Data, ICT and Water Governance: The Need for an Information Policy to Achieve the Goal.**  
*Arturo Fernández-Palacios*; IECA, Directorate of the Environment, Regional Government of Andalusia.
- D. Collaborative production and management of water information. How to make polycentric information available to managers, agencies and the public: Spanish experience with Water WISE, INSPIRE Directive and other water related databases.** *Javier Ruza*; Water Directorate, Ministry of Agriculture, Food and the Environment of Spain.

### ] Session 4. KEY ISSUES IN INFORMATION DISSEMINATION, VISUALIZATION, AND TRANSLATION TO DIFFERENT AUDIENCES

That session looked at how different platforms, tools and methodologies for exchange and collaboration allow the forging of social learning and knowledge on water, as products of the last stage of the information cycle. Special attention was given to the creation of decision-making: indicators, web viewers, modeling, etc. and how these tools evolve in the light of the continuing scientific, technological and social change. The session analyzed the conditions under which knowledge could be produced and openly shared.

- A. Sustainable Development Indicators: Dealing with complexity in governance.**  
*Mario Giampietro*; Catalan Institute for Research and Advanced Studies (ICREA) and Autonomous University of Barcelona, Spain.
- B. Tools for collaborative management of information.**  
*J. Félix Ontañón & Juan Romero*; Open Kratio, Seville, Spain.
- C. The National Drought Mitigation Center: Building a conduit to bring the science to citizen.**  
*Brian Fuchs*; Drought Mitigation Center, University of Nebraska – Lincoln, USA.
- D. Participatory knowledge generation for decision making.** *Hoshin Gupta & Aleix Serrat-Capdevila*; University of Arizona, USA.

## Conference final remarks

In the spirit of open information and collaboration in the production of knowledge that inspired the Conference, a collaborative working tool was setup for conference participants to upload their comments and reflexions on the content of the conference. Using their input, as well as that of the rapporteurs of the different sessions, a preliminary version of conference conclusions was presented during the last session and can be accessed [here](#).

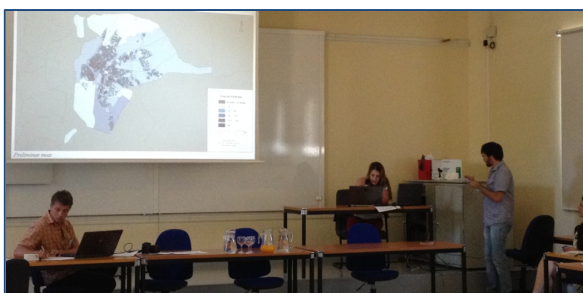
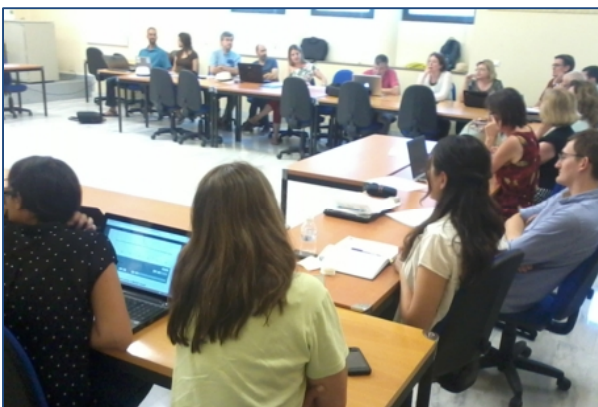
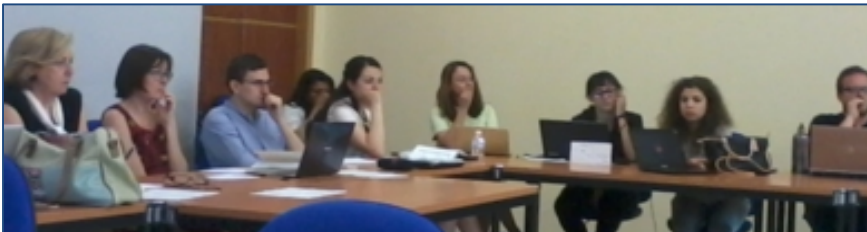
## 4<sup>th</sup> SWAN Progress Meeting in Seville

Following the International Conference SWAN partners met on Thursday and Friday for the Fourth SWAN Progress Meeting. In addition to members from the different research teams, participants included members of the SWAN Stakeholder advisory board Dr. Francesc La Roca (University of Valencia), Ed Curley (Pima County Association of Governments) and Dr. Chris Scott (University of Arizona), as well as stakeholders from Bulgaria (Leonid Todorov, Geographica Ltd.) the Netherlands (Mr. Pol Hakstege, Senior Advisor / Technical Manager, Ministry of Infrastructure and Environment, Rijkswaterstaat), and the UK (Christopher Short, UWE-University of Gloucestershire and Nick Jones of UWE). The progress meeting served to share scientific progress and plan the next steps for the SWAN project. A series of workshops were also held, related to SWAN's main lines of research over the next 12 months. We will provide updates about these works in the next USE SWAN Newsletter:

- [Development of a Feasibility Study for the creation of a Center for a Transatlantic Dialogue on Water](#). The Center is set out to be the primary institutional output of SWAN. Discussions are underway regarding potential content, form and funding for such an endeavor.
- [Water Policy in the European Union: Challenges & Future Steps](#). The goal of the Workshop was to discuss the experience of different EU member states (Spain, the Netherlands and Bulgaria) with the implementation of the European water legislation, and identify challenges and opportunities moving forward. A secondary goal was to draw upon the experience of both European and US partners and stakeholders to initiate a discussion about a comparative analysis of EU and USA approaches to water management, particularly in what pertains to the challenges associated with attempts to establish a common framework and goals among the 50 different States in the case of the USA, and 17 Member States in the case of the EU.
- [Public Participation in Water Management](#): In this session the UWE team presented five contrasting case studies of public participation in water management from the US and Europe that will serve as the basis for the Stakeholder Handbook that is one of their primary outputs within SWAN.
- [Tucson Basin Case Study Progress Report](#). During the first two years of the SWAN project, the work developed by the various SWAN visiting students and scholars to the University of Arizona has coalesced in a collaborative and transdisciplinary research effort called the Tucson Basin Case Study. The aim of this session was to share and discuss research lines from the different SWAN participants. The goal was to discuss next steps, and coordinate approaches and synergies. The session served to develop an improved picture of each researcher's approach to their work on the Case Study, the next steps for them and coordination needs with other SWAN members working in the Tucson Basin.

- [Implementation of a Global Climate and Water Monitor: Conveying Knowledge from Data.](#) Members of the University of Seville SWAN Team's Climate Division Natalia Limones and Juanma Camarillo presented a global climate web viewer that contains information from 1901 to the present at a monthly time scale and with a resolution of half a degree of latitude and longitude. Several indicators from the Climate Research Unit (CRU-University of East Anglia) time series were generated, in addition to many others which are in continuous development, and are displayed along with the original climatic variables, conveying some information of extraordinary value which is not sufficiently exploited and accessible to the public. This product intends to continue growing in terms of embedded information from ideas, initiatives and data derived from other SWAN team members and studies, but also to support the research of such members, especially those working in the TAMA case study and of the wider research and professional community.

The Global Climate Monitor was launched to the public as an open data tool in June 2014 and is accessible at: [www.globalclimatemonitor.org](http://www.globalclimatemonitor.org)



## SWAN Consortium & Contact Information

- ❑ Centre National de la Recherche Scientifique, France.
- ❑ National Institute of Geophysics, Geodesy and Geography; Bulgarian Academy of Sciences (BAS-NIGGG).
- ❑ UNESCO- IHE; Institute for Water Education.
- ❑ Universidad de Sevilla; Departments of Geography.
- ❑ University of Arizona; Department of Hydrology and Water Resources.
- ❑ University of the West of England, Bristol; The Bristol Group for Water Research at UWE, Bristol (BGWR).

The **University of Seville (USE) Team** is led by Dr. Leandro del Moral (Department of Human Geography), [lmoral@us.es](mailto:lmoral@us.es). The other team members are professors and PhD candidates that belong to the Spatial Structures and System Research Group (GIEST-HUM 396):

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SWAN web page:  
<http://swanproject.webhost.uits.arizona.edu/>

## Forthcoming Events

### [European Researcher's Night \(26 September 2014\)](#)

Leandro del Moral and Natalia Limones, will be present at the next edition of "The Researchers' Night" that will take place on September 26 in Seville. They will talk about the latest advances in collaborative research on issues related to water. Read more about it in the recent article published in the magazine *iagua* (in Spanish).

A [Special Issue](#) was launched in March 2014 in the Journal *Water Alternatives* under the title **Information and Knowledge for Water Governance in the Networked Society**. Over 50 proposed abstracts were received and 14 were accepted. Expected publication date is June 2015. The Special Issue is coordinated by members of the USE SWAN team with financial support of the SWAN Project (Sustainable Water ActionN: Building Research Links between the US and the EU). Final version of papers are expected by April 15, 2015 for publication on the first of June 2015.



*Presentations and further information on the International Conference on data, information and knowledge for water governance in the networked society can be found at the web page of the GIEST Research Group:*  
<http://grupo.us.es/giest/>