

# INTERNATIONAL CONFERENCE ON OPEN KNOWLEDGE: BRIDGING PERSPECTIVES TO ADDRESS WATER CHALLENGES

] 15-17 February 2015

**Data, information and knowledge for water governance:  
Lessons from the SWAN project**

] TUCSON, ARIZONA



# PRESENTATION OUTLINE



**A) OVERVIEW OF FOUR YEARS OF RESEARCH**

**B) MAIN CONCLUSIONS**

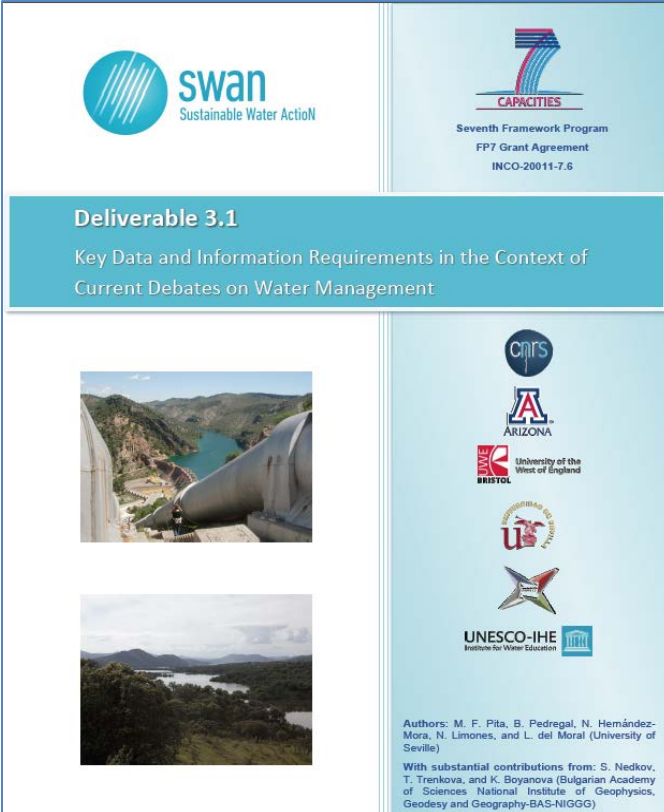
**C) QUESTIONS FOR DEBATE WITH CONFERENCE PARTICIPANTS**

Workshop on *New paradigms for water resources and risk management: Data and information requirements for sustainable water management.*  
Seville, January 2013

## What are the information needs under evolving water management paradigms?

1. Current paradigms in the management of water resources
2. Economic considerations in evolving water management debates
3. Modeling hydro-social systems
4. Transparency and public participation
5. New information technologies

Deliverable 3.1 and publication in ***Spanish Geographer Association Bulletin*** (Pita *et al.*, 2014)



The image shows the cover of a report titled 'Deliverable 3.1'. The top left features the 'swan Sustainable Water Action' logo. The top right displays the 'CAPACITIES' logo, which is a stylized number 7, and text indicating it is a 'Seventh Framework Program FP7 Grant Agreement INCO-20011-7.6'. The central title 'Deliverable 3.1' is in a teal box, followed by the subtitle 'Key Data and Information Requirements in the Context of Current Debates on Water Management'. Below the title are two landscape photographs: one of a dam and another of a reservoir. The right side of the cover lists logos for partner institutions: CNRS, ARIZONA, University of the West of England BRISTOL, UFR, and UNESCO-IHE Institute for Water Education. At the bottom, the authors are listed as M. F. Pita, B. Pedregal, N. Hernández-Mora, N. Limones, and L. del Moral (University of Seville), along with a note about substantial contributions from S. Nedkov, T. Trenkova, and K. Boyanova (Bulgarian Academy of Sciences National Institute of Geophysics, Geodesy and Geography-BAS-NIGGG).

What about the internet?!



# Water Alternatives

WaA call for papers: Water knowledge and governance



**Special issue: Information and Knowledge for Water Governance in the Networked Society**

**Special issue: Information and Knowledge for Water Governance in the Networked Society**  
**Guest editors: Belén Pedregal, Leandro Del Moral and Nuria Hernández-Mora**

] June 2015

] 7 papers

**Information and knowledge for water governance in the networked society**

Belén Pedregal, Violeta Cabello, Nuria Hernández-Mora, Natalia Limones and Leandro Del Moral  
*Water Alternatives* 8(2): 1-19      [Abstract](#) | [Full Text - PDF](#)

**Water and climate data in the Ganges Basin: Assessing access to information regimes and implications for cooperation on transboundary rivers**

Sagar Prasai and Mandakini Devasher Surie  
*Water Alternatives* 8(2): 20-35      [Abstract](#) | [Full Text - PDF](#)

**Spatialising agricultural water governance data in polycentric regimes**

Faith Sternlieb and Melinda Laituri  
*Water Alternatives* 8(2): 36-56      [Abstract](#) | [Full Text - PDF](#)

**Not just a tool. Taking context into account in the development of a mobile App for rural water supply in Tanzania**

Anna Wesselink, Robert Hoppe and Rob Lemmens  
*Water Alternatives* 8(2): 57-76      [Abstract](#) | [Full Text - PDF](#)

**Community knowledge sharing and co-production of water services: Two cases of community aqueduct associations in Colombia**

Valeria Llano Arias  
*Water Alternatives* 8(2): 77-98      [Abstract](#) | [Full Text - PDF](#)

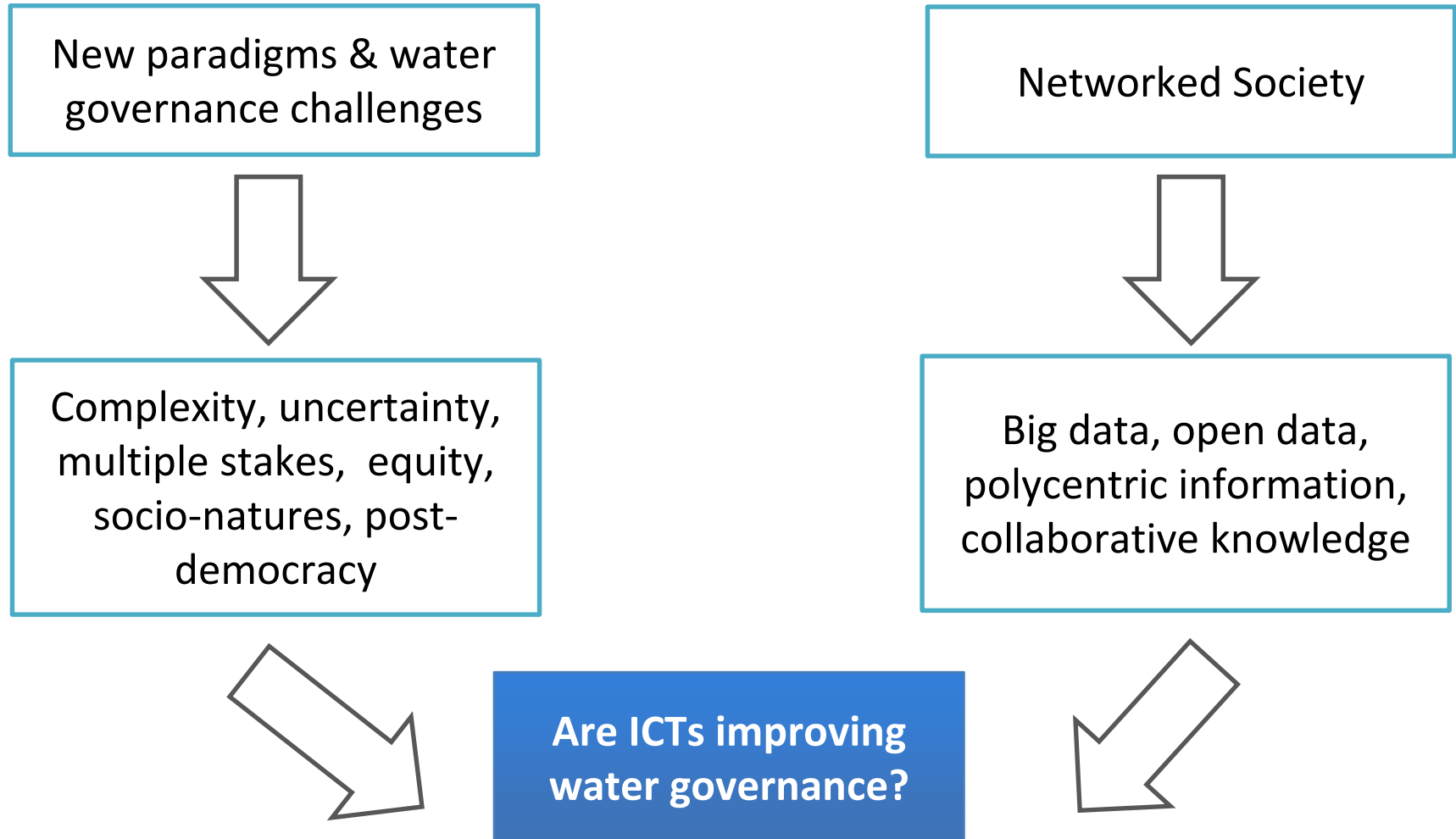
**Networked water citizen organizations in Spain: Potential for transformation of existing power structures in water management**

Nuria Hernández-Mora, Violeta Cabello, Lucia De Stefano and Leandro Del Moral  
*Water Alternatives* 8(2): 99-124      [Abstract](#) | [Full Text - PDF](#)

**Does social media benefit dominant or alternative water discourses?**

María Mancilla García  
*Water Alternatives* 8(2): 125-146      [Abstract](#) | [Full Text - PDF](#)

## B) QUESTIONS OF DEPARTURE

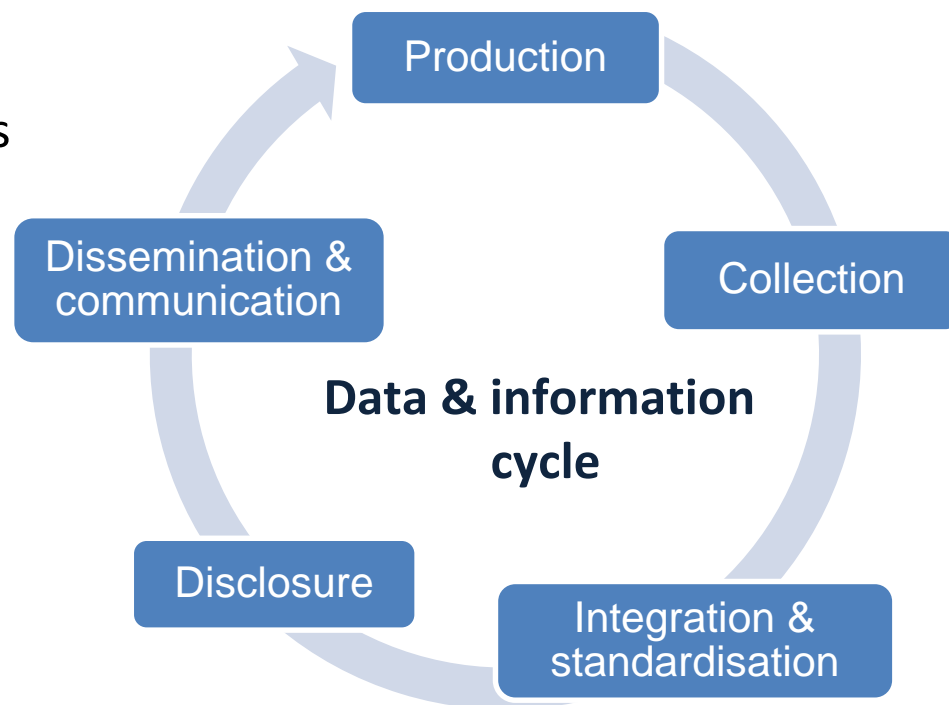


- 1) Meeting information and transparency needs?
- 2) Participated decision-making and power imbalances?

How are ICTs facilitating new practices of collaborative & distributed generation and access to information?

Water data are diverse, crowdsourced by networks of actors at different scales, dependent on governance systems...

.... sensitive handling **BOTH TECHNICALLY AND POLITICALLY**, especially in transboundary basins



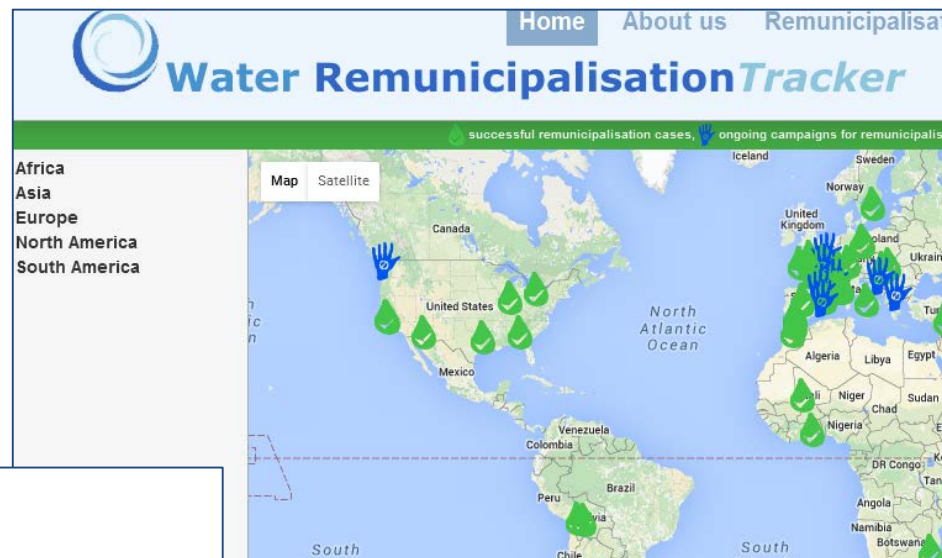
Two relevant trends driven by ICTs





## 2) Crowdsourcing applications for water-data generation ('citizen-sensing')

- Citizen science
- Participatory geo-webs for activists campaigns



### Water Point Mapper LITE

A free, simple and powerful mapping tool

[Home](#) [About the mapper](#) [Upload a map](#) [Sanitation Mapper](#) [Mapper Lite](#)

#### Sanitation mapping, a solution

The Sanitation Mapper is a participatory decision-support and monitoring tool which can provide information to inform local planning at district and sub-district levels. It has been designed to provide both area-based mapping, such as improved sanitation coverage at the village level, and point-based mapping, for identifying of the distribution and status of shared latrines in urban areas.

To help us improve the Sanitation Mapper, which is presently in Beta, and to receive any software updates, please email to [waterpointmapper@wateraid.org](mailto:waterpointmapper@wateraid.org). The Software is designed to be accompanied by the Sanitation Mapper User Guide.



- mApps for improving water supply and sanitation in weak-administration states

‘political apps’ with governance goals

To what extent are ICTs providing new avenues for participated decision-making and contributing to alter dominating power balances in water governance?

### TECHNOPOLITICS



Appropriation of ICTs  
for political action

- **New forms of social action enabled by ICTs in water issues**
- **Technological uptake as an iterative and interactive process** between social dynamics, technological structures and institutional frameworks
- **Social actors combine different strategies** with online and offline tools depending on context, scale and goals

### Transformative potential of ICTs

- More essential as geographical and problem scales increase
- Reduce costs of organization and participation
- Sharing data and information can enable the development of alternative meanings and narratives

### BUT

- Social media are also tools to consolidate dominant discourses, they do not structurally change the *status quo*
- Without a real political willingness to open up spaces of deliberation where all actors can participate in conditions of equality, ICTs do not alter the basic framework for water policy- making

**The potentialities of ICTs as transformative tools are linked to the regeneration of the context within which decisions are made, that is, the democratic process itself**

How are ICTs influencing means of producing, sharing and disseminating data and information about water management?

How are these changes improving transparency and accountability of water administrations?

What opportunities are they generating for a more balanced and fair public participation in decisions over water management?

## REFERENCES CITED

Pita et al. 2014. Deliverable 1.1 SWAN project.

[http://swanproject.arizona.edu/sites/default/files/Deliverable\\_3\\_1\\_web.pdf](http://swanproject.arizona.edu/sites/default/files/Deliverable_3_1_web.pdf)

Water P2P Conference materials

<http://swanproject.arizona.edu/international-conferences>

Water Alternatives Special Issue

<http://www.water-alternatives.org/index.php/current-volume/289-volume-8-issue-2>