15-17 February 2015

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

TUCSON, ARIZONA
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)
What about the internet?!
International conference on *Data, Information and Knowledge for Water Governance in the Networked Society*. Seville, June 2014

Hashtag #WaterP2P14

Streaming videos: http://swanproject.arizona.edu/international-conferences
A) SPECIAL ISSUE IN WATER ALTERNATIVES

Water Alternatives

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

Guest editors: Belén Pedregal, Leandro Del Moral and Nuria Hernández-Mora

Information and knowledge for water governance in the networked society
Belen Pedregal, Violeta Cabello, Nuria Hernandez-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 Sune
Water Alternatives 8(2): 20-35 Abstract | Full Text - PDF

Spatialising agricultural water governance data in polycentric regimes
Faith Steenholb and Molinda 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): 57-75 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 Hernandez-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

June 2015

7 papers
B) QUESTIONS OF DEPARTURE

New paradigms & water governance challenges

Complexity, uncertainty, multiple stakes, equity, socio-natures, post-democracy

Networked Society

Big data, open data, polycentric information, collaborative knowledge

Are ICTs improving water governance?

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
1) National & international advances on Right To Information policies, Open Data strategies and interoperability of geospatial information

Inchoate progress on water governance data at local and regional levels

Hindered by: closed government cultures, poor quality of data, information overload, privacy legislation and lack of standards
B) WATER INFORMATION

2) Crowdsourcing applications for water-data generation (‘citizen-sensing’)

- Citizen science
- Participatory geo-webs for activists campaigns

• mApps for improving water supply and sanitation in weak-administration states
  ‘political apps’ with governance goals
B) POWER AND WATER POLITICAL PROCESSES

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
B) POWER AND WATER POLITICAL PROCESSES

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
C) QUESTIONS FOR THE DEBATE

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?
Pita et al. 2014. Deliverable 1.1 SWAN project. 
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