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Track C: Geographical approaches and visual and interactive strategies for river landscapes

MAKING SOCIETY AN ACTIVE PARTICIPANT IN WATER MANAGEMENT STRATEGIES: ICT AND PARTICIPATIVE / COLLABORATIVE MAPPING TOOLS

Participative mapping tools, hybridization, river water management

The conservation of natural resources in urban contexts is challenged by uncontrolled urbanization, that causes the loss of biodiversity and threatens the preservation of river ecosystems. Rivers can contribute to the wealth of cities but they are often treated as natural barriers or as water sources to consume: they should be recognized as living systems able to produce multi-dimensional benefits (environmental, but also social, cultural and economic).

The links between rivers and community need to be re-established, helping people to understand the benefits that rivers produce and to identify effective river management/regeneration strategies, starting from community needs, habits and uses.

Community involvement is therefore a key point.

This paper aims to analyse innovative case studies of river water management, focusing on applications in water management (data collection) and multicriteria evaluation, supported by participative processes.

The participative process is based on the identification of clear and measurable indicators, which allow the collection of data to be processed and interpreted through multicriteria analysis. Maps, Infographics and other visualization tools represent a synthesis of complex dynamic systems and flows, which have two uses: (1) to identify and assess future scenarios of river water management; (2) to enhance awareness among citizens, improving resilient behaviours.

In order to understand the convenience of participative tools for river water management, some experiences will be analysed. The RESTORE (Rivers: Engaging, Supporting and Transferring knowledge for Restoration in Europe) and BeWater projects, which show how shared knowledge on river restoration can be an invaluable resource to enhance river landscape regeneration, promoting the knowledge of good practices and tools and encouraging social awareness and capacity building in water management challenges. At the same time, the Eco2 Cities (The World Bank) and Ecocitizenworldmap in Cairo (Egypt) show how participative mapping, citizens' involvement and data visualization can be useful tools to improve river water management.

References:

Suzuki H et al. (2010), *Eco2 Cities, Ecological Cities as Economic Cities*, The World Bank.

Eberlein S (2014), "Understanding your city by understanding its flow: towards Participatory Urban Metabolism Information Systems", <http://ecocitizenworldmap.org/>

Fusco Girard L., Cerreta M., De Toro P. (2014), "Integrated Assessment for Sustainable Choices" in *Sr Scienze Regionali*, vol.13.

BeWater <http://www.bewaterproject.eu/>

RESTORE European River Restoration Conference <http://www.restorerivers.eu/>