

The role of knowledge brokering in governance of complex (river basin) systems

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The inherent complexity of the social-ecological system of river basins means that management decisions in water management are always challenged by a lack of knowledge. This situation is exacerbated by rapidly changing physical and socio-economic boundary conditions such as climate change. In complex social-ecological systems, knowledge about the system (system understanding) that is needed to design policy interventions is distributed among several actors: scientists, stakeholders and policy makers. Knowledge brokering aims at bridging the knowledge gap between these actors by exchanging and sharing information about the system in different manners. For this purpose knowledge brokering processes are designed as collaborative learning processes in which science, experience and insight can be related to policy more effectively.

Knowledge brokering instruments, such as role playing and simulation games, group model building, scenario planning and futures visioning exercises are exemplary tools for creating conversations between policy makers, stakeholders and the research community. The process of exposing, sharing and co-creating multiple understandings of specific environmental challenges provides opportunities for identifying knowledge gaps and needs, as well as sources of knowledge. Depending on the specific application context, knowledge brokering activities may result in a multitude of outcomes: (i) on the political level it challenges political assumptions and redefines the information that is used, (ii) on the policy level it will discover new policy problems, reframe the problem, or influence policy development, and (iii) on the knowledge management level it can help to distil and exploit available scientific knowledge, and it can assist the generation of meaningful research questions.

This paper presents the results from an initial analysis of the processes and outcomes of knowledge brokering experiments carried out in the PSI-connect project (www.psiconnect.eu), a three-year collaborative project funded under the European Commission's 7th Framework Programme. The project works to develop, test and disseminate effective knowledge brokering practices in water management by bringing together scientists, policy makers and stakeholders in 'real life policy cases' at three levels of governance: the European Union, the national and the regional scale. Drawing on these cases, we will illustrate and discuss bottlenecks and barriers for the success of structured bridging of science-policy gaps in river basin management. These bottlenecks and barriers are described from (i) the political context, (ii) the organisation and structure of the policy process and (iii) from the differences between the worlds of scientists, policymakers and stakeholders. These worlds have different languages, routines and time frames.