

Learning to adapt

Patrick Huntjens, an expert in both complex systems and policy, worked with specialists in social science, ecology, hydrology and civil engineering to compare water-management practices across countries and to provide guidance for adaptation under climate variability.

■ What was the impetus for this project? What was the main objective of the work at the beginning of the project?

In this study, we compared eight water management regimes in different countries increasingly threatened by floods and droughts as a consequence of climate change as part of a large project called NeWater funded by the European Commission. NeWater recognizes that fundamental changes are needed in how water is managed all over the world. In our comparative study, we analysed what makes water management and governance systems able to deal with the challenges posed by climate change. Our research focuses on the so-called integrated water resources management framework and the kind of adaptive management it presupposes. It integrates a wide range of concepts and applies them to the specific context of each basin. As a result, we developed empirical evidence relevant to further analysis, policy recommendations and guidance for practitioners.

■ How did you go about finding suitable collaborators?

Finding suitable collaborators for this project wasn't difficult because the need for interdisciplinary research in water management is widely recognized by the community. Hence experts in water issues are generally open to the idea of collaboration across disciplines. Furthermore, in this case the funder required the project to be interdisciplinary.

■ Did any difficulties arise in working with a team of experts with different research backgrounds and perspectives?

It is always a challenge when people from different fields work together, as each discipline abstracts differently from the real world. Languages, theories and methods of different disciplines do not fit together like pieces of a puzzle. It is important to create transparency about theoretical foundations, definitions, methods and concepts. This process takes longer than developing research based on one discipline. In this particular project, we made sure that we had a fair representation of different experts and stakeholders in the group to balance views and knowledge. A participatory approach, including policymakers, water users, environmental non-governmental organizations and the private sector, was fundamental to address this complex policy problem. We also adopted a group model-building approach to achieve a common ground across participants by asking them to join in a series of round-table discussions in which we guaranteed equal input from all; this allowed integration of different knowledge frames, conflicting attitudes and ideas.

■ What was the highlight of working with an interdisciplinary team?

Even though there were many different backgrounds, we realized how much we needed each other. By including non-experts in the learning process we were actually able to transcend disciplinary boundaries and come close to the nature of complex problems. Thanks to this approach, we were able to propose institutional designs fine-tuned to the context of regional geography, ecology, economy and culture.

■ Any surprises?

I was surprised to find an even greater diversity of views on the issue than originally expected. Different stakeholders, as well as different experts, brought their own view and concerns. I was also surprised about the extent to which all participants were willing to contribute to a process that required a lot of time. It was really energizing. We found their willingness to contribute to the process directly linked to the sense of ownership and urgency of the questions addressed.

■ Did you learn any lessons about interdisciplinary collaboration from this project that would benefit others trying to do similar work?

The transdisciplinary nature of this project complements the interdisciplinary approach. It adds lateral thinking within the context of established disciplines. However, in the beginning it is important to make sure that more than one discipline is really required to answer the research question, given the high costs of interdisciplinary research. Then a common understanding of the problem has to be achieved. This is a demanding task, as it challenges the foundations of each discipline. Also, in research supporting policy learning, the inclusion of different stakeholders magnifies the challenge, but their inclusion is important to advance understanding of problems and solutions in water management and water governance.

■ Was it difficult to get financial support and what would you suggest to researchers looking for funding to carry out interdisciplinary work?

The EU framework programmes support interdisciplinary work, but they don't support lengthy research with uncertain outcomes. As far as NeWater is concerned, four years was too short for such a complex project with stakeholder involvement. We had to promise and even quantify the resources required for a number of products where we knew in advance that we would need more time and flexibility during project implementation. We managed quite well in this respect. According to the project leader, Claudia Pahl-Wostl, a key lesson is not to enforce the proposal word by word, but rather to be adaptive within the constraints imposed by the funder.

■ Any final thoughts?

As in the case of human towers, where increasing levels can only be reached by building on the shoulders of others, here we've developed a conceptual tower. Both require learning, training and capacity building to improve and become stronger.

INTERVIEW BY MONICA CONTESTABILE

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