

Project description

IUSF-TIAS Autumn School “Concepts, frameworks and methods for the comparative analysis of water governance” (28 Oct. – 6 Nov. 2015)

Motivation

The proposed Autumn School focuses on comparative research with water governance as the area of application. Water governance, in a broad sense, refers to “the range of political, social, economic and administrative systems that are in place to regulate the development and management of water resources and provisions of water services at different levels of society” (United Nations Development Programme, 2000). It also refers to the fact that water policies and instruments are formulated and implemented not by just one organization or institution but by the actions and interactions of actors and networks at multiple levels of society (Bressers and Kuks, 2003; Pahl-Wostl, 2009). The analysis of water governance systems is a relatively new research domain that arose from the recognition that many water problems – e.g. water scarcity, floods, poor water quality – are caused by governance problems, such as weak institutional and regulatory frameworks, poor financial management and a lack of collaboration and capacity, rather than resource or technology problems. Hence, improving water governance is widely seen as the key to more effective and sustainable water management (GWP, 2000; OECD, 2011).

Our primary motivation for organising this Autumn School is to enhance the awareness of and knowledge about comparative methods among water governance researchers. The rationale behind this is that our understanding of water governance systems has been progressing in the past decades but remains limited. As governance systems are complex and context-dependent, solutions or remedies that work in one context are not necessarily successful in another context. Nevertheless, idealized design principles based on institutional and technological panaceas have been applied to water issues without long-term monitoring of their performance and effectiveness, and without revision and critical reflection on practice that would have responded to failure earlier (Gleick, 2003; Ingram, 2007; Meinzen-Dick, 2007). Privatization – or private sector dominance in the provision of water services – has for example been promoted based on the belief that private companies operating in market-based settings would solve problems with inefficiency and ineffectiveness of government organizations. Experience is quite varied though with some striking failures – notably in developing countries (Bakker, 2010). Identifying general patterns of successful governance systems without resorting to simplistic blueprints is challenging but crucial for improving our understanding of the systems that are potentially supportive of sustainable water resources management (Ingram, 2007; Ostrom, 2007; Pahl-Wostl, 2009; Vinke-de Kruijf and Ozerol, 2013). Yet, most water governance research is based upon single in-depth case studies, which runs the risk of generating only fragmented knowledge that lacks the potential to derive more general insights (Pahl-Wostl and Kranz, 2010). In this Autumn School, lecturers and participants will explore ways of overcoming these issues by critically discussing the role and use of various concepts, frameworks and methods for the comparative analysis of water governance systems.

Another key motivation for organising this Autumn School is to support young water governance researchers in the various challenges they face. As water governance research cuts across disciplinary boundaries, researchers need to integrate and move beyond existing scientific disciplines. While water governance increasingly develops as a distinct research field, conceptualizations of water governance are evolving and widely accepted conceptual frameworks and theories are not yet available (Pahl-Wostl, 2009). To understand, employ and integrate the diversity of theories, discourses, methodologies

and concepts is challenging to young researchers who often are not trained to integrate biophysical and social sciences (Patterson et al., 2013). This Autumn School will support young researchers by guiding them through a range of relevant theories, concepts and frameworks to avoid philosophical and methodological mismatches and conflicts.

Compared to more disciplinary-bounded research, water governance research poses considerable professional challenges to young researchers. For example, they may experience difficulty in identifying relevant professional networks and scientific journals (Patterson et al., 2013). From previous Autumn Schools, we also know that many young water governance researchers have little opportunity within their own institutions to interact with peers who have similar interests. An important aspect of the Autumn School is therefore to provide networking opportunities for young researchers and to provide the forum which allows them to learn from the experiences of others, for example, regarding publication strategies and project development.

Another challenging aspect of water governance research is to produce knowledge that is relevant to not only science, but also to policy and practice (Patterson et al., 2013; Pahl-Wostl et al., 2013). Throughout the Autumn School, attention will be given to linking policy and practice, involving stakeholders, fostering mutual and transformative learning processes and other aspects that are relevant for the production of socially relevant knowledge.

Objectives and scope

This Autumn School's objectives are to raise the awareness of and knowledge about comparative water governance research and to support young (doctoral and postdoctoral) researchers in developing their career. The event brings together lecturers and participants with diverse disciplinary backgrounds who will exchange and discuss their knowledge about and experiences with the comparative analysis of water governance systems, including the applicability of specific concepts, frameworks and methods. By participating in this Autumn School, young researchers can expect:

1. To deepen their current understanding of the concepts, frameworks and methods that are supportive of comparative analysis in water governance.
2. To strengthen their ability to assess and apply key concepts, frameworks and methods in comparative water governance research.
3. To establish new network contacts with both young and experienced researchers from various disciplinary and socio-cultural backgrounds.
4. To strengthen their ability to critically reflect on research activities and proposals (from themselves and others) as well as to develop ideas for future research.
5. To strengthen their general ability to execute, communicate and publish socially relevant, interdisciplinary water governance research.

Senior scientists with relevant expertise on the key topics will be brought in to lead the sessions. In plenary lectures and working sessions, they will approach the Autumn School theme from different perspectives, whilst touching upon philosophical, methodological, normative and practical issues. Some sessions are oriented towards the practical application of specific concepts, methods or frameworks and the production of socially relevant knowledge. Other sessions focus more on theoretical concepts and discourses and normative and philosophical issues, such as, the desirability of comparing and the appropriateness of generic concepts, methods or frameworks. In any event, specific attention will be paid to questions of causality and contextuality, which are both at the heart of comparison in water governance.

Themes and issues to be addressed

The following topics will be covered in the Autumn School:

1. Introduction to comparative water governance research: overview of the water governance literature and comparative methods.
2. Key themes:
 - 2.1. Concepts: role and use of theoretical concepts, discourses, and overcoming paradigms as panaceas.
 - 2.2. Frameworks: background and use of existing frameworks, theory-building.
 - 2.3. Methods: introduction of various methods for comparative analysis, selecting and comparing cases, data collection, use of databases and secondary data.
3. Cross-cutting themes: working across disciplinary boundaries, linking research and practice, publication of results.

1. Introduction

Even though the Autumn School is an advanced course, a basic introduction of governance in the context of sustainable water management is considered valuable. Not only do participants have diverse background and skill levels, the distinction between governance and management is not always clear and conceptualisations of these processes are evolving and remain contested. Also, researchers can hold different positions on the uses and purposes of comparison. This may relate to different notions of causality and contextuality, which are not always made explicit. To avoid philosophical and methodological ambiguities, lecturers will be asked to begin their session with an introduction of how they define and approach water governance and reflect upon their experiences with comparative analysis. In addition, a general overview of water governance and comparative methods will be provided on the first day. Related key questions are:

- How do we conceptualize (and assess) water governance systems?
- What is the value and purpose of comparative water governance research?

2. Key themes

2.1 Concepts

Concepts do play an important role in water management research, policy and practice. Some concepts have been around for several decades now (e.g. integrated water resources management (IWRM), good governance and public participation) whereas other concepts have been emerging more recently (e.g. water-energy-food nexus or adaptive water management). Many of these concepts have proven to play an important role in steering research projects and attracting the attention of policymakers and politicians; yet they are often mistakenly presented or promoted as panaceas or universal remedies to water problems. Against this background, this Autumn School aims to provide a forum where participants critically discuss and reflect on the role and use of theoretical and policy concepts. Related key questions are:

- How do theoretical and policy concepts relate to comparative water governance research?
- How can comparative research contribute to the development/critique of central concepts and help to overcome the role of paradigms as panaceas in water governance analysis and policy discourse (for example by assessing their contextuality)?
- What are requirements for a diagnostic approach that maps classes of problems to classes of solutions and assesses transferability of lessons learned from one place to another?

2.2 Frameworks

In the past decades, various frameworks were developed to analyse and assess social-ecological systems in general and water governance systems in particular. Examples of these frameworks are the Driver, Pressure, State, Impact, Response (DPSIR) framework that is commonly used in the policy domain, the Management and Transition Framework that focuses on adaptive and integrated management (developed by Pahl-Wostl) and the Social-Ecological Systems Framework that focuses on sustainable resource governance (developed by Ostrom) (for an overview, see Binder et al., 2013). Each of these frameworks rests on diverse assumptions, concepts, values and practices and is rooted in diverse scientific disciplines. The Autumn School aims to provide participants with a general overview of various frameworks and their underlying assumptions. Moreover, attention will be paid to the need and use of frameworks in comparative research as well as the role of theories and how to contribute to theory-building. In a working session, participants will acquire practical experience in the application of the Management and Transitions Framework. Related key questions are:

- What are the (disciplinary) backgrounds of well-known existing frameworks (e.g. the Management and Transition or the Social-Ecological Systems Frameworks)?
- To what extent are standardized representations needed and useful when comparing water governance systems?
- To what extent are existing frameworks supportive of comparative water governance research?
- How do frameworks relate to theories and how can the use of frameworks contribute to theory-building?

2.3 Methods

How to actually design and implement comparative water governance research is another key theme in the proposed Autumn School. In the various sessions, lecturers will discuss a range of methods for comparative analysis, including qualitative methods (small-N), qualitative comparative analysis (intermediate-N) and quantitative methods (large-N). In addition, there will be attention given to mixed methods (i.e. combining qualitative and quantitative methods). Particular attention will be paid to set-theoretic methods, including Qualitative Comparative Analysis (QCA), which enable cross-case comparison – and therefore the formulation of more generalizable insights – while capturing the complexity of individual cases. The method assumes set-theoretic relations, i.e. various combinations of conditions may produce the same outcome, instead of correlational relationships between variables (Rihoux and Ragin, 2009; Schneider and Wagemann, 2012). The method was recently applied successfully in water governance research (Huntjens et al., 2011; Pahl-Wostl and Knieper, 2014). Attention will also be paid to the selection of cases, the collection of data (fieldwork), the design and use of databases for storing and organizing data and the harmonization of primary data and secondary data (e.g. from existing databases). Related key questions are:

- What are the advantages and disadvantages of various methods when comparing complex water governance systems?
- How do comparative designs relate to other designs (e.g. single case studies)?
- What methods exist for selecting cases and collecting data? What are the main issues?
- How can we design and use databases in comparative water governance research?
- How can we harmonize data from existing databases (secondary data) and primary data?

3. Cross-cutting issues

Complex environmental problems cannot be tackled using traditional conceptual frameworks and disciplinary approaches and methods alone. They require research that integrates insights from the natural and the social sciences and produces socially relevant knowledge (Pahl-Wostl et al., 2013). To be relevant, water governance researchers should thus work across disciplinary boundaries and link research and practice. As a consequence, (young) researchers face multiple challenges, including generating peer-reviewed knowledge and fostering transformative learning processes (Patterson et al., 2013). Within this context, the Autumn School aims to address a number of cross-cutting questions:

- How can we effectively generate peer-reviewed knowledge (i.e. what are appropriate journals and what can we expect from and deal with review processes)?
- How can we best work with stakeholders in our research and effectively link research and practice (i.e. how to engage stakeholders and to advise policy makers)?
- How can we address and overcome disciplinary boundaries (i.e. raise epistemological awareness and avoid discipline-specific jargon)?

Programme

The Autumn School will take place over nine days, excluding the arrival day (Tuesday) and departure day (Friday). The programme consists of two lecturing blocks, one in the first week (Weds., Thurs., Fri.) and another one in the second week (Mon., Tues., Weds.). The final Thursday will be used to summarize and evaluate the sessions including lectures and group work. A detailed overview of the programme is included at the end of this section. Throughout the Autumn School, participants are expected to actively engage in discussions, to apply the various concepts, frameworks and methods that they learn, and to present and reflect on their own and the research designs of other participants. There will be ample opportunity to discuss conceptual and methodological issues with other participants and the lecturers.

Format of the sessions

The general format of the lecturing days is to hold interactive lectures in plenary sessions, followed by working sessions in which participants further reflect upon, and as appropriate apply, the theme of the lecture in small groups. As a means of introducing the lecturer, one of the organisers or participants will interview the lecturer asking questions regarding his or her personal and professional background, the highlights and lowlights of their career, greatest challenges and so on. In the plenary sessions, the lecturers will address one or more of the following aspects of comparative water governance research: philosophical, theoretical and methodological underpinnings (with attention to disciplinary boundaries, models, paradigms and concepts), practical implementation (the development of a research design, selecting and analysing cases, design and use of databases), as well as communication (network development, communication tailored to various sectors/stakeholders, dissemination to policy and practice and scientific publications). Lecturers will be asked to provide a proper introduction to the topic (i.e. underlying background, concepts, definitions), to present the ‘state-of-the-art’ as well as innovations and critiques, to consider the diverse backgrounds and knowledge levels of participants, to provide concrete examples, to reflect upon practical experiences and to use a dynamic, lively and interactive teaching approach that allows for informal discussions.

In the working sessions, participants can further apply and reflect on the aspects that have been introduced and discussed in the plenary lectures. On the first day, participants will be asked to present their own research (the organisers will likely request a poster and a 3-minute pitch) and to comment on the research of other participants. In the other sessions, participants can be asked to actually apply a concept, framework or method that has been taught to their own research, to develop a research design

for a particular pre-formulated research theme and so on. When possible, participants will work in small teams comprising persons who have experience with different research methods. The working session on QCA and the one on frameworks and databases will be organized in collaboration with experts from the Institute of Environmental Systems Research (Claudia Pahl-Wostl, Christian Knieper). Participants will be asked to bring their laptops so that they can acquire practical experience with relevant software.

Additional activities and follow-up

To stimulate informal contacts, the organizers will arrange an excursion and organize a farewell party on the last evening. In the period before the Autumn School, a list of participants will be provided including information about their research and the participants are invited to join a LinkedIn group so that they have the opportunity to get to know each other a bit in advance of the event. Moreover, they can make use of the opportunity to share any of their draft materials (e.g. a research design or draft journal article) with one of the lecturers. Throughout the Autumn School, there will be time for the lecturers to provide written and oral feedback on this piece of work.

Experiences from young researchers in Australia indicate that the establishment of communities of practice is a practical and valuable strategy for supporting young researchers in the water governance domain (Patterson et al., 2013). Inspired by these experiences and our own, we will offer participants the option of setting up a separate working group on comparative water governance under the umbrella of The Integrated Assessment Society (TIAS). Like other TIAS working groups, this group could organise webinars, collaborate in joint projects and organize a session for an upcoming TIAS conference (planned for 2016). This initiative could help participants staying in touch with each other and also support them in extending their network further.

References

- Bakker, K.J., 2010. Privatizing water: governance failure and the world's urban water crisis. Cornell University Press, Ithaca, NY.
- Binder, C.R., Hinkel, J., Bots, P.W.G., Pahl-Wostl, C., 2013. Comparison of Frameworks for Analyzing Social-ecological Systems, Ecology and Society. The Resilience Alliance.
- Bressers, H.T.A., Kuks, S.M.M., 2003. What does "governance" mean? From conception to elaboration, In: Bressers, H., Rosenbaum, W.A. (Eds.), Achieving sustainable development: The challenge of governance across social scales. Praeger Publishers, Westport, pp. 65-88.
- Gleick, P., 2003. Global Freshwater Resources: Soft-Path Solutions for the 21 Century. . Science 302 1524-1528.
- GWP, 2000. Towards Water Security: A framework for action. Global Water Partnership, Stockholm, Sweden and London, United Kingdom.
- Huntjens, P., Pahl-Wostl, C., Rihoux, B., Schlueter, M., Flachner, Z., Neto, S., Koskova, R., Dickens, C., Kiti, I.N., 2011. Adaptive Water Management and Policy Learning in a Changing Climate: a Formal Comparative Analysis of Eight Water Management Regimes in Europe, Africa and Asia. Environmental Policy and Governance 21, 145-163.
- Ingram, H., 2007. Beyond Universal Remedies for Good Water Governance: A Political and Contextual Approach, In: Garrido, A., Ingram, H. (Ed.), Water for Food in a Changing World. Routledge, pp. 241-261.
- Meinzen-Dick, R., 2007. Beyond panaceas in water institutions. P Natl Acad Sci USA 104, 15200-15205.
- OECD, 2011. Water Governance in OECD Countries: A Multi-level approach, OECD Studies on Water. OECD publishing, Paris, France.
- Ostrom, E., 2007. A diagnostic approach for going beyond panaceas. P Natl Acad Sci USA 104, 15181-15187.
- Pahl-Wostl, C., 2009. A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes. Global Environmental Change-Human and Policy Dimensions 19, 354-365.
- Pahl-Wostl, C., Giupponi, C., Richards, K., Binder, C., de Sherbinin, A., Sprinz, D., Toonen, T., van Bers, C., 2013. Transition towards a new global change science: Requirements for methodologies, methods, data and knowledge. Environmental Science & Policy 28, 36-47.
- Pahl-Wostl, C., Knieper, C., 2014. The capacity of water governance to deal with the climate change adaptation challenge: Using fuzzy set Qualitative Comparative Analysis to distinguish between polycentric, fragmented and centralized regimes. Global Environmental Change 29, 139-154.
- Pahl-Wostl, C., Kranz, N., 2010. Water governance in times of change. Environmental Science & Policy 13, 567-570.

- Patterson, J.J., Lukaszewicz, A., Wallis, P.J., Rubenstein, N., Coffey, B., Gachenga, E., Lynch, A.J.J., 2013. Tapping fresh currents: Fostering early-career researchers in transdisciplinary water governance research. *Water Alternatives* 6, 293-312.
- Rihoux, B., Ragin, C.C., 2009. *Configurational comparative methods: Qualitative comparative analysis (QCA) and related techniques*. Sage, Los Angeles - London - New Delhi - Singapore.
- Schneider, C.Q., Wagemann, C., 2012. *Set-theoretic methods for the social sciences: A guide to qualitative comparative analysis*. Cambridge University Press, New York.
- Vinke-de Kruijf, J., Ozerol, G., 2013. Water management solutions: on panaceas and policy transfer, In: De Boer, C., Vinke-de Kruijf, J., Ozerol, G., Bressers, J.T.A. (Eds.), *Water Governance, Policy and Knowledge transfer: International Studies in Contextual Water Management*. Earthscan from Routledge, London, pp. 12-35.