

Programme

General set-up of the programme

The Autumn School was organized around a series of fourteen three-hour sessions (a 30-minutes break divided each session into two parts of 1.5 hours each). All sessions included plenary presentations, lively discussions and in most of the sessions an exercise was carried out in small groups of 2-5 persons. The session leaders were introduced by means of a 15-minutes interview during which they provided an insiders perspective into their daily life. Between the morning and the afternoon session, we had a 1.5 hour lunch break. On the evening of the first lecturing day, participants were invited to have a welcome drink in the hotel bar. On four other evenings, we organized, on request of the participants, 1.5 hour discussion sessions on various themes. During the break and in the evenings participants had plenty of opportunity to interact with senior scientists (all of them stayed for one or multiple nights at the venue). The event was closed with a farewell party during which participants were invited to present their respective own country or culture. A detailed outline of the programme is provided below.

Detailed outline of the final programme

Tuesday 27th of October	
Check-in at JUFA Jülich Energiewelt Indeland im Brückenkopf Park	
18:30	Joint Dinner with participants, organizers and present session leaders, including welcome and introduction to the Autumn School programme (by: Prof. Claudia Pahl-Wostl, Katharina Butke and Joanne Vinke-de Kruijf)
Wednesday 28th of October	
9:00-12:30	Introduction to Water governance and comparative analysis (Prof. Claudia Pahl-Wostl) The first session started with a brief introduction round in which participants were introducing their respective neighbours. A plenary presentation was alternated with lively discussions regarding questions such as: When does governance fail? What does polycentricity mean against the background of centralization and decentralization attempts? Why does actual implementation of scientific concepts and policy lag behind?
12:30-14:00	<i>Lunch break</i>
14:00-17:30	Participants presenting their own research and expectations of the training (moderated by Prof. Claudia Pahl-Wostl) In a plenary session, participants presented their research in three minutes presentations. Themes that were covered included: Irrigation, urban water management, international/transboundary cooperation/agreements, polycentricity, participation, justice, reforms, climate change adaption, power, collective action, social networks, Water Framework Directive, governance assessment, infrastructure investment, learning and the nexus.
18:30	<i>Dinner</i>
19:30	<i>Welcome drinks</i>

Thursday 29th of October	
9:00-12:30	Frameworks for analyzing socio-ecological systems (SES) (Prof. Claudia Binder) Participants were introduced into a variety of frameworks, each of them potentially helping to answer diverse research questions. In groups of two persons, participants tried to apply the Institutional Analysis and Development framework to their own research. Special attention was also given to Elinor Ostrom's SES framework. An introduction of the GoSES database (Christian Knieper) was provided and participants were given the opportunity to insert their data into the database. We discussed the frameworks (e.g. how are they being applied in practice and where to place values) as well as how the GoSES database can be improved.
12:30-14:00	<i>Lunch break</i>
14:00-17:30	Introduction of the Management and Transition Framework (MTF) (Prof. Claudia Pahl-Wostl) and the MTF database (Christian Knieper). Following two plenary introductions, participants were given the opportunity to insert their data into the MTF database in a working session. We discussed questions related to the meaning of an action situation, how to include the emergence of new technology and how to study power using one of the presented frameworks.
18:30	<i>Dinner</i>
19:30-21:00	Discussion session on developing countries (with Prof. Claudia Pahl-Wostl)
Friday 30th of October	
9:00-12:30	Introduction of Property-Rights Theory (Prof. Insa Theesfeld) In a plenary presentation, Insa gave an in-depth explanation of ownership versus property, water rights, bundles of rights, gaining rights, development and changes of property rights as well as common pool resources and property rights regimes. In a working session participants had to come up with a "good matrix" for water. The session closed with an introduction of a framework to analyse land and water grabbing.
12:30-14:00	<i>Lunch break</i>
14:00-17:30	The management and governance of water resources in the Eifel-Rur region, including an excursion to nearby projects (Dr. Antje Goedeking) In a plenary presentation, the water system, the organization of water management (including relevant legislation), project implementation, stakeholder participation as well as strengths and weaknesses of the governance structure were explained. The session continued with an excursion during which participants could see the results of a river restoration project as well as the open-cast mines. For the excursion, Wasserverband Eifel-Rur arranged transportation by bus as well as drinks and snacks.
18:30	<i>Dinner</i>
Saturday 31st of October and Sunday the 1st of November: leisure time A group of ten participants made use of the opportunity to jointly visit a large freshwater reservoir in the Eifel-Rur catchment.	

Monday 2nd of November	
9:00-12:30	<p>Causality and explanation: comparative method's ontological and epistemological underpinnings (Prof. Peter Mollinga)</p> <p>This session started with an introduction into philosophy of science, including the meaning of the terms ontology and epistemology. Multiple types of explanations and theories of causation were introduced. A positivist, post-positivist (also: critical realism) and interpretivist perspective on scientific research was presented. Special attention was given to critical realism (the perspective of the lecturer), which focuses on meanings as causes as well as events, mechanisms and structures. We discussed the meaning of inter-, multi-, cross- and transdisciplinarity, the research perspective of Elinor Ostrom (who developed the IAD and SES frameworks) and the possibility of combining ontologies.</p>
12:30-14:00	<i>Lunch break</i>
14:00-17:30	<p>Research design and fieldwork for comparative research (Prof. Peter Mollinga)</p> <p>This session focused on how comparisons are made from interpretivist, positivist and critical realist research perspectives. Special attention was again given to critical realism in which comparisons can be made by varying on cases and outcomes (i.e. most similar and most different research design and Mill's method of agreement and difference). In this perspectives, cases are "situations" and can be primary, secondary or tertiary. We discussed when we commit ourselves to an ontology, where it comes from and why it may change over time. Also, we discussed the meaning of words like structure and conceptual model.</p>
18:30	<i>Dinner</i>
19:30-21:00	Discussion session on Transboundary and global issues (with Prof. Peter Mollinga)
Tuesday 3rd of November	
9:00-12:30	<p>Introduction to Qualitative Comparative Analysis (QCA) as a research approach (Dr. Stefan Verweij)</p> <p>QCA was introduced as a case-oriented, set-theoretic and iterative approach that seeks to balance between comparison on number of aspects and number of cases. The approach helps to formalize and systematizes comparisons. Two participants presented an example of a QCA approach in water governance research: "The development of a model for QCA: experiences from the KNOW2ADAPT research project" (Joanne Vinke-de Kruijf) and "A study of the relation between governance system configuration and adaptive capacity using fsQCA" (Christian Knieper). In a working session, participants tried to formulate a research question, outcome of interest and conditions related to their own research. We discussed the philosophical underpinnings of QCA and addressed questions related to contextualization, aggregation, number of cases versus number of conditions, variation of outcome and normative aspects.</p>
12:30-14:00	<i>Lunch break</i>

Tuesday 3rd of November (continued)	
14:00-17:30	An introduction of QCA analytical techniques (Dr. Stefan Verweij) In a plenary presentation, participants were explained how to move from a data matrix to a truth table. Issues like contradictions, limited diversity, consistency and coverage, 'solutions' (patterns to an outcome) were addressed and the importance of interpretation and documenting choices was stressed. Exercises were handed out so that participants could apply basic QCA analytical techniques in groups. One of the participants provided a presentation "Analysing and interpreting data in QCA: an overview of the key challenges" (Christian Knieper). The session was closed with a brief discussion related to the great number of subjective decisions, the meaning of causality in QCA and how to get started.
18:30	<i>Dinner</i>
19:30-21:00	Discussion session Learning and Transformative Change (with Prof. Claudia Pahl-Wostl)
Wednesday 4th of November	
9:00-12:30	Water governance assessment and comparison from a public policy perspective (Prof. Hans Bressers) In a plenary presentation, a model for assessing governance in terms of extent and coherence with a focus on property and use rights, public governance and sustainable use was provided. We discussed the model in relation to other frameworks (e.g. IAD) and the integration of sectors. The concept of boundary spanning was introduced and a more elaborated version of the presented model (the so-called governance assessment tool) was introduced, including its application to concrete cases. In a working session, participants tried to apply the assessment tool to four provided cases. We discussed the interrelations between diverse governance qualities, how to move from observations to recommendations and policy actions as well as the inclusion of normative or ethical aspects.
12:30-14:00	<i>Lunch break</i>
14:00-17:30	Governance of socio-technical and socio-ecological systems (SES) (Prof. Rolf Künneke) An interactive presentation was provided regarding the applicability of the SES framework to analyse institutions and technology/infrastructure. Within this context, the SES framework (not a model or theory) was presented as being actor-centric and oriented towards sustainability, policies and self-governance. We discussed the meaning of a focal action situation. The importance of socio-economic and technological drivers was stressed and diverse economic perspectives were presented. The critical transactions framework (focusing on the alignment of institutions and technology at multiple levels) was introduced and its applicability discussed.
18:30	<i>Dinner</i>
19:30-21:00	Discussion session Career Development (with Prof. Claudia Pahl-Wostl and Prof. Rolf Künneke)

Thursday 5th of November	
9:00-12:30	<p>An introduction into interdisciplinary and transdisciplinary water governance research (Dr. Joanne Vinke-de Kruijf) A brief plenary presentation was provided, which led to lively discussions about how to jointly define a problem and the importance of incentives and motivations for transdisciplinary research. We concluded that a societal problem does not necessarily match the expertise or interests of a researcher.</p> <p>Science communication (Sören Bauer) A plenary introduction was given into communication (stressing the importance of visuals) and the ‘message box’ was introduced as a tool. In groups, the participants tried to apply the message box to their own research. Two persons of each group had the opportunity to report back in the role of journalist (interviewer) or researcher (interviewee). We discussed how interests of a journalist or the researcher can complicate communication and dissemination.</p>
12:30-14:00	<i>Lunch break</i>
14:00-17:30	<p>Synthesis and summary of the Autumn School sessions (Joanne Vinke-de Kruijf) An interactive presentation of the presented and discussed themes was provided.</p> <p>Evaluation and follow-up activities (Caroline van Bers) In a plenary discussion we discussed: What has been learned and how can this be used in your own research? What could be potential follow-up activities? Participants were requested to complete the evaluation forms.</p> <p>Closing words (Claudia Pahl-Wostl) and handing over of certificates (organizers)</p>
18:30	<i>Dinner</i>
20:00	<p>Farewell party (participants) Participants performed songs, dance, presentations and the like or brought drinks or food to present their country of origin.</p>
Friday 6th of November	
	Check-out and departure