

# MARIO ANGST

Sustainability Governance | Networks | Data Analysis | Social-Ecological Systems

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🔗 scholar.google.com/citations?user=bNkbVRwAAAAJ



## EMPLOYMENT HISTORY

Postdoctoral researcher 70%

**Swiss Federal Institute for Forest, Snow and Landscape Research WSL**

📅 since 04/2020

📍 Birmensdorf

Research: Sustainability transformations, sufficiency policy, governance in rural regions, causal loop diagramming, multi-level network analysis methods, policy forums

Postdoctoral researcher 70%

**Eawag aquatic research**

📅 03/2019 to 06/2020

📍 Dübendorf

Research: Social-ecological networks, integrated network models, participatory systems mapping, ecosystem governance, environmental policy, energy policy, policy instrument choice

PhD Student 70-100%

**Eawag aquatic research**

📅 08/2015 to 03/2019

📍 Dübendorf

Research: Governance and policy networks, governance subsystems, water governance, policy integration

Civil Service, Landscape Quality and Ecosystem Services

**Swiss Federal Office for the Environment**

📅 12/2014 to 05/2015

📍 Ittigen

Conceptual assistance in a pilot project aiming to integrate landscape perspectives into spatial development objectives

Communication/ Marketing

**restorm.com**

📅 01/2011 to 11/2011

📍 Zürich

Bike Messenger

**Genossenschaft Veloblitz**

📅 03/2009 to 11/2017

📍 Zürich

Radio Journalist (trainee), 30%

**toxic.fm**

📅 08/2009 to 09/2010

📍 St.Gallen

(\*only employment longer than four months shown)

## ACADEMIC VISITS

Research visit at Stockholm Resilience Centre

📅 06/2019 to 10/2019

📍 Stockholm

Development of integrated network models for ecosystem governance. Scientific exchange grant for four months. Swiss National Science Foundation

## CORE COMPETENCES



**Sustainability Governance and Policy**

Sustainability governance happens in the interaction of state, private and civil society organizations. I investigate the nuts and bolts of it



**Complex Social-Ecological Systems**

I develop and apply innovative methods to investigate complex systems by untangling problem structure and governance networks at the same time - to find conditions for successful outcomes



**Networks**

From governance networks to social-ecological networks and integrated networks of actors and causal graphs



**Data Analysis**

Network analysis, Bayesian data analysis with a focus on (multi-level) regression models and causal inference, and compelling data visualizations. Methods development where it is needed

## EDUCATION

2015-2019

**PhD in Political Science**

🎓 University of Bern 📍 Bern

Summa cum laude

2012-2014

**Master of Science in Sustainable Development**

🎓 University of Basel 📍 Basel

2008-2012

**Bachelor of Arts in Political Science/  
Environmental Science**

🎓 University of Zürich 📍 Zürich

## PUBLICATIONS

### Peer-reviewed articles

- Angst, Mario (2020). "Bottom-Up Identification of Subsystems in Complex Governance Systems". In: *Policy Studies Journal* 48.3, pp. 782–805. DOI: 10.1111/psj.12301.
- Kammermann, Lorenz and Mario Angst (2020). "The Effect of Beliefs on Policy Instrument Preferences: The Case of Swiss Renewable Energy Policy". In: *Policy Studies Journal* early view. DOI: 10.1111/psj.12393.
- Metz, Florence, Mario Angst, and Manuel Fischer (2020). "Policy integration: Do laws or actors integrate issues relevant to flood risk management in Switzerland?" In: *Global Environmental Change* 61, p. 101945. DOI: <https://doi.org/10.1016/j.gloenvcha.2019.101945>.
- Angst, Mario (2019). "Networks of Swiss Water Governance Issues. Studying Fit between Media Attention and Organizational Activity". In: *Society & Natural Resources* 32.12, pp. 1416–1432. DOI: 10.1080/08941920.2018.1535102.
- Fischer, Manuel, Mario Angst, and Simon Maag (2019). "Co-participation in the Swiss water forum network". In: *International Journal of Water Resources Development* 35.3, pp. 446–464. DOI: 10.1080/07900627.2017.1374929.
- Angst, Mario, Alexander Widmer, Manuel Fischer, and Karin Ingold (2018). "Connectors and coordinators in natural resource governance: insights from Swiss water supply". In: *Ecology and Society* 23.2. DOI: 10.5751/ES-10030-230201.
- Angst, Mario and Christian Hirschi (2017). "Network Dynamics in Natural Resource Governance: A Case Study of Swiss Landscape Management". In: *Policy Studies Journal* 45.2, pp. 315–336. DOI: 10.1111/psj.12145.

### Book chapters

- Angst, Mario and Manuel Fischer (2020). "Identifying Subsystems and Crucial Actors in Water Governance: Analysis of Bipartite Actor—Issue Networks". In: *Networks in Water Governance*. Ed. by Manuel Fischer and Karin Ingold. 1st ed. Palgrave Macmillan. Chap. 5, pp. 115–143. DOI: 10.1007/978-3-030-46769-2.

### Software

- Angst, Mario and Tim Seppelt (2020). *motifr: Motif analysis in multi-level networks*. R package version 0.2.

### Reports and Practitioner Journals

- Andri, Bryner, Angst Mario, Manuel Fischer, and Stefan Vollenweider (2020). *Wasserpolitischer Jahresrückblick 2019 (transl: Review of Swiss Water Politics 2019)*. Aqua Gas 5/2020.
- Andri, Bryner, Angst Mario, Manuel Fischer, and Stefan Vollenweider (2019). *Wasserpolitischer Jahresrückblick 2018 (transl: Review of Swiss Water Politics 2018)*. Aqua Gas 4/2020.
- Angst, Mario (2012). *Integration of nature protection in Swiss forest policy*. INTEGRATE country report. Swiss Federal Research Institute for Forest, Snow and Landscape WSL, Birmensdorf.

## SKILLS

Data Gathering

Survey Design

Participatory system mapping

Standardized interviews

Text mining

Semi-structured interviews

Webscraping

Analysis

Network analysis/ ERGM

(Multi-level) regression/ GLMs

Bayesian data analysis

Quantitative text analysis

Causal graphs

Machine learning

Computer Skills

R

Shiny

Python

HTML/ CSS

Javascript/ D3

Hugo, blogdown

Git

Make

Inkscape

Gephi

Audio editing

LaTeX

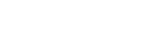
Languages

German

English

French

Spanish



# TEACHING

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## Main instructor

(\*sole instructor if no other person is mentioned)

### Sustainability transformations

📅 Fall Semester 2020 📍 University of Bern

BA level seminar, 6 ECTS, 30 participants

### Smartphone democracy

📅 Spring Semester 2020 📍 University of Bern

BA level seminar, 6 ECTS, 30 participants

### Concepts, analytical approaches and tools for network analysis

📅 2019/05/07 📍 ETH Zurich

Workshop for development economics research group, 12 participants

### Social network analysis. A primer

📅 2018/04/18 to 2018/04/19 📍 University of Bern

Intensive introductory workshop for PhD students, with Laurence Brandenberger, 7 participants

### Governance networks

📅 Spring Semester 2017 📍 University of Bern

BA level seminar, 6 ECTS, 30 participants

## Teaching contributions

### Research data management

📅 2019/11/22 📍 University of Bern

Guest talk in PhD and master colloquium

### Social-ecological networks in swiss wetlands

📅 2018/04/18 📍 University of Bern

Guest lecture in course Policy Analysis III (Prof. Karin Ingold)

### Identifying overlapping policy subsystems

📅 2017/03/21 📍 University of Bern

Guest lecture in course Environmental Policy Analysis (Prof. Karin Ingold)

### Social network analysis. An Introduction.

📅 2017/03/21 📍 Eawag

Co-teaching in internal workshop at Eawag

### Identifying policy issue involvement of actors in an interactive survey

📅 2016/05/10 📍 University of Bern

Guest talk in course Governance (PD Manuel Fischer)

## (Co-)supervision of junior researchers

### Ongoing

- Huber, Martin. Ecosystem governance and social-ecological networks in Switzerland: bringing politics back in. (PhD) - with Manuel Fischer
- Widmer, Seraina. Civic tech in sustainability transformations. (BA)

### Finished

- Tommaso, Lavinia. The Wetlands project: towards a socioecological network. 2020. (MA) - with Manuel Fischer and Frédéric Varone
- Thees, Oscar. Gathering data from hyperlink networks for the study of political networks. 2019. (BA) - with Laurence Brandenberger
- Rohn, Camille. Critical consumption as a form of political participation in Bern. 2018. (BA)
- Grünholz Mirjam. Analysis of political decision-making in Swiss cantons based on the multiple streams approach. 2017. (BA) - with Karin Ingold

## CONFERENCE PRESENTATIONS

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*Why Do Actors Choose to Participate in Forums, and in Which Ones?* Angst, Mario, Jack Mewhirter and Manuel Fischer

**ECPR General Conference**

📅 2020/08/028

📍 Innsbruck (virtual)

*What makes ecosystem governance successful? A comparative study of twelve Swiss wetlands combining social network analysis and causal loop diagramming.* Angst, Mario, Manuel Fischer and Martin Huber

**Sunbelt Conference**

📅 2020/07/16

📍 Paris (virtual)

*Policy belief differences as obstacles to information exchange in natural resource governance.* Angst, Mario and Laurence Brandenberger

**ECPR Joint Sessions**

📅 2019/04/09

📍 Mons

*Cross-Sectoral Policy Integration.* Metz, Florence, Mario Angst and Manuel Fischer

**Sunbelt Conference**

📅 2017/09/08

📍 Utrecht

*Advantage or Coordination? Why Actors are Involved in Multiple Policy Subsystems.* Angst, Mario

**ECPR General Conference**

📅 2017/09/08

📍 Oslo

*Overcoming fragmentation: Core-periphery brokerage and central coordination in natural resource governance.* Angst, Mario, Alexander Widmer, Manuel Fischer and Karin Ingold

**SPSA Swiss Political Science Association Conference**

📅 2017/01/11

📍 Bern

(\*presentations by others with a listing as co-author but no presentation given not shown)

## PANELS

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Panel Chair: Adaptive Water Governance in Social-Ecological Systems

**ECPR General Conference**

📅 2020/08/25

📍 Innsbruck (virtual)

Dialogue Session Input: Scales and Scaling in Transitions

**International Sustainability Transitions Conference**

📅 2020/08/20

📍 Vienna (virtual)

## REVIEWING

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**Completed reviews for:**

- Policy Studies Journal
- Politics and Governance
- Policy Sciences
- Ecology and Society
- Environmental Conservation
- Journal of Environmental Studies and Sciences
- Forest Policy and Economics
- SAGE Open
- Europ. Computational Social Science Conference
- International Journal of Social Economics
- Arabian Journal of Geosciences

## INSTITUTIONAL WORK

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- Elected member of the internal ecology team at Eawag (responsible for sustainable management of energy, consumables and other resources)
- Founding member of internal Eawag group FlyAware for climate-friendly mobility. Development and submission of policy recommendations based on staff survey, multiple workshops.

## SCIENTIFIC SOCIETIES

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- Member of multi-national scientific network headed by Mark Lubell (UC Davis, USA) and Örjan Bodin (SRC Stockholm, SWE) to coordinate data gathering and databases on social-ecological networks.
- Member of ECPR (European Consortium for Political Research) standing groups on Environmental Policy and Political Networks
- Member of INSNA International Network for Social Network Analysis
- Member of the Swiss Political Science Organization

## OUTREACH

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**Service outside academia**

- Elected board member of Veloblitz (urban logistics enterprise, ca. 100 employees). Focus on corporate social impact, sustainability and potential for improvements in data analysis and business analytics

**Science communication**

- Communication of published research findings on blogs and communication outlets targeted at practitioners (defacto.expert, Eawag News)
- Creation of homepage to communicate research findings on network development in regional nature park Thal. Findings were used in successful re-application of park for federal funding.

## FUNDING HISTORY

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### Scientific exchange grant

 06-10/2019  9500 CHF  Swiss National Science Foundation

Development of integrated network models for ecosystem governance.  
Research visit at the Stockholm Resilience Center

### Postdoc Academy for Transformational Leadership

 2019 to 2021  ca. CHF 2000 ongoing  Robert Bosch Foundation

2-year postdoc academy for selected group of 20 European Postdocs working in inter- and transdisciplinary sustainability science. Grant from the Robert Bosch Foundation covering travel and workshop expenses. Possibility to apply for seed funding for group projects.

### Development of motifr R package

 03/2020  ca. 4000 CHF  University of Bern

Early-career researcher grant for support (salary of research assistant) in the development of motifr R package.

### Total

 2019-2020  CHF 15'500

## BEYOND WORK

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First and foremost father.  
Beyond this avid bikepacker, solo and band musician, sometimes writer.