

MARIO ANGST

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

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EMPLOYMENT HISTORY

Postdoctoral researcher 50/70%

Eawag aquatic research

📅 since 02/2021 | 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

Postdoctoral researcher 70%

Swiss Federal Institute for Forest, Snow and Landscape Research WSL

📅 04/2020 to 12/2020 📍 Birmensdorf

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

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

📅 since 01/2021 | 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 and Laurence Brandenberger (forthcoming 2021). "Information exchange in governance networks - Who brokers across political divides?" In: *Governance*, accepted for publication.
- 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 1.0.0.

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

TeX

Languages

German

English

French

Spanish



TEACHING

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

Teaching example

I ran two week-long "book club" courses for the fall semester 2019 and spring semester 2020. In these courses, 25 students were encouraged to deeply engage with popular science books on digital democracy (2019) and sustainability transformations (2020), juxtaposed with scientific articles. The courses aimed at enhancing the ability of the students to embrace the complexity of difficult topics. The authors of the books under study were invited to class to answer questions at the end of the week. Students evaluated both courses as highly effective both for acquiring knowledge and sparking interest in the topic (example 2019: scores for course content: 4.6/5; for commitment of the lecturer: 4.83/5).

(I liked) "the freedom for reading and thinking. Every idea is given enough space in this course."

(2020 participant evaluation statement, translated from German)

"It was a great format and I really liked acquiring knowledge as a group. (...) Mario is an incredibly engaged, down-to-earth and comprehensible teacher with great expertise and social skills."

(2019 participant evaluation statement, translated from German)

CONFERENCE PRESENTATIONS

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

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

Completed reviews for:

- Policy Studies Journal
- Politics and Governance
- Policy Sciences
- PS: Political Science and Politics
- 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

- 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

- 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

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

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

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