

## Curriculum vitae

### 1. Personal Information

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Name                      Elke Kellner, PhD in Climate Science  
 University                Wyss Academy for Nature, University of Bern, Switzerland  
 Email                      elke.kellner@unibe.ch

[Personal Website](#) / [Google Scholar](#) / [ORCID](#) / [Twitter](#)

### 2. Education

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01/2024                    **Certificate in Teaching and Learning with Generative AI**, Arizona State University, US.

03/2023                    **Certificate in Inclusive Communities**, Arizona State University, US.

10/2022                    **Certificate in Preventing Harassment and Discrimination in Teaching**, Arizona State University, US.

04/2022                    **Certificate in Social and Behavioral Research Investigators**, University of Arizona, US.

04/2022                    **Certificate in Native American Research**, University of Arizona, US.

11/2019 – 12/2019       **Certificate in Rhetoric in Scientific Presentations**, University of Bern, CH.

08/2016 – 10/2019       **PhD in Science in Climate Science (summa cum laude)**, Institute of Geography and Oeschger Centre for Climate Change Research, University of Bern, CH. Title: “*Multipurpose reservoirs for alleviating water shortages: Opportunities and challenges in the governance processes to coordinate competing resource uses under climate change*”. Supervisors: Prof. Dr. Rolf Weingartner (Hydrology) and Prof. Dr. Jean-David Gerber (Urban & Regional Planning).

10/2017 – 09/2019       **PhD courses** in “Social Network Analysis (SNA)”, “Earth system variability through time”, “Climate action - communication, advocacy, and technological solutions”, “Polycentric climate governance”, “Transdisciplinary research: Science meets practice”, “Governing climate change: Polycentricity in action?”, “Forest and environmental policy research”, “Scientific writing”, and “Scientific integrity”. CH, DE, NL.

02/2018 – 04/2019       **Certificate of Advanced Studies (CAS) in Higher Education**, University of Bern, CH.

01/2016 – 07/2016       **Certificate in Spatial Planning**, Swiss Association of Spatial Planning, Bern, CH.

09/2013 – 03/2015       **BSc Minor Sustainable Development**, University of Bern, CH. Grade: excellent.

07/2005 – 07/2006       **Nature Conservation and Experiential Education**, BUND für Umwelt- und Naturschutz, Ravensburg, DE.

08/1998 – 07/1999       **Guest Student in Organic Agricultural Sciences**, University of Kassel, DE.

04/1995 – 03/1997       **Diploma (equivalent to MSc) in Biochemistry**, Free University of Berlin, DE. Grade: excellent.

10/1993 – 03/1995       **Pre-Diploma in Biochemistry**, Free University of Berlin, DE. Grade: excellent.

08/1991 – 09/1993       **Pre-Diploma in Biology**, Philipps University Marburg, DE. Grade: excellent.

### 3. Employment history

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| 02/2022 – present  | <b>Marie Curie Fellow.</b> Inter- and transdisciplinary research projects: (1) Sustainable resource governance under pressure: How to govern trade-off situations under global change. (2) Collaborative governance in a Citizen Science Project on wildlife monitoring.   |
| 07/2024 – present  | <b>Senior researcher.</b> Wyss Academy for Nature, University of Bern, Switzerland, CH.  |
| 03/2024 – 06/2024  | <b>Nominated visiting scholar.</b> Ostrom Workshop, Indiana University Bloomington, US.  |
| 02/2022 – 02/2024  | <b>Associated faculty and lecturer.</b> School of Sustainability, College of Global Futures and Center for Behavior, Institutions and the Environment, Arizona State University, US.   |
| 08/2022 – 12/ 2022 | <b>Lecturer.</b> School of Geography, Development & Environment, College of Social and Behavioral Sciences, University of Arizona, US.   |
| 02/1999 – present  | <b>Lecturer.</b> Faculty of Organic Agricultural Sciences, University of Kassel, Witzenhausen, DE.   |
| 04/2021 – 01/2022  | <b>Postdoctoral researcher.</b> Wyss Academy for Nature, University of Bern, CH. (1) Developing the “Step-by-step approach for transdisciplinary research projects”. (2) Transdisciplinary project "Local energy transition experiments for a low-carbon society".   |
| 01/2019 – 12/2021  | <b>Pilot Programme.</b> Transdisciplinary project about energy transformations in collaboration with municipalities, companies, and authorities from local to national levels, Laax-Flims, CH.   |
| 12/2011 – 12/2021  | <b>Elected member</b> of the commission “Processing and trade of certified organic food” (MKV). <b>Bio Suisse</b> , Basel, CH.   |
| 11/2019 – 10/2021  | <b>Postdoctoral researcher.</b> Groups of “Environmental and Resource Economics” and “Mountain Hydrology and Mass Movements” at Swiss Federal Institute for Forest, Snow and Landscape Research WSL (ETH Zürich domain), CH. Inter- and transdisciplinary projects: (1) Interdisciplinary and transdisciplinary projects: Water-Energy-Food Nexus in Switzerland. (2) Governance of the warning chain for Swiss severe weather events at the national, regional, and local levels. |
| 08/2016 – 10/2019  | <b>PhD Researcher.</b> Institute of Geography and Oeschger Centre for Climate Change Research, University of Bern, CH.   |
| 01/2016 – 12/2016  | <b>Research Assistant.</b> Section for Federal Planning, Federal Office for Spatial Development (ARE), Bern, CH. Project manager to evaluate the national spatial planning processes.  |
| 07/2014 – 12/2015  | <b>Research Assistant.</b> Section for Sustainable Development, Federal Office for Spatial Development (ARE), Bern, CH. Co-organizer and co-leader of a participatory process with 150 stakeholders to develop the Swiss Sustainable Development Strategy 2016-2019.   |
| 08/2014 – 01/2015  | <b>Lecturer.</b> Faculty of Agricultural, Forest and Food Sciences HAFL, Bern University of Applied Sciences, CH.  |
| 12/2006 – 12/2013  | <b>Lecturer and Research Assistant.</b> Faculty of Agricultural, Forest and Food Sciences HAFL, Bern University of Applied Sciences, CH.   |
| 07/2005 – 11/2006  | <b>Teacher</b> for nature conservation excursions with schools: BUND für Umwelt- und Naturschutz, Ravensburg, DE.  |

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| 2004 – 2012       | Five weeks per year in summer: <b>management of an alpine dairy</b> , Balisalp in the Bernese Oberland, CH. Fully responsible for cheese production, milking of dairy cows, and herding of cows, heifers, and pigs. |
| 04/1997 – 07/1997 | <b>Research Assistant</b> . Institute of Food Science, ETH, Zurich, CH.   |
| 03/1997           | <b>Employee</b> . Chees dairy Dr. Oskar Flüeler, Alpnach Dorf, CH.  |
| 10/1995 – 12/1995 | <b>Research Assistant</b> . Harvard Medical School Boston, Center for Blood Research, Department of Genetics, Boston, US.   |
| 08/1995 – 09/1995 | <b>Research Assistant</b> . Max Planck Institute of Molecular Plant Physiology, Potsdam, DE.  |
| 05/1995 – 07/1995 | <b>Research Assistant</b> . Max Planck Institute of Immunobiology and Epigenetics (MPI-IE), Freiburg, DE.   |

#### 4. Institutional responsibilities

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|-------------------|---|
| 08/2022 – 01/2024 | Member, Faculty Committee, School of Sustainability, Arizona State University, US.  |
| 01/2018 – 06/2019 | Member of the Commission Quality Assurance and Development (QAD), Institute of Geography, University of Bern, CH.                               |
| 01/2018 – 06/2019 | Representative of Intermediate Academic Staff, Institute of Geography, University of Bern, CH.  |
| 01/2008 – 12/2012 | Member of the Commission on Research, Faculty of Agricultural, Forest and Food Sciences HAFL, Bern University of Applied Sciences, CH.          |
| 08/2007 – 12/2012 | Representative of Intermediate Academic Staff, Faculty of Agricultural, Forest and Food Sciences HAFL, Bern University of Applied Sciences, CH. |

#### 5. Teaching activities (WT = Winter Term; ST = Summer Term)

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| Arizona State University:                 | Policy and Governance in Sustainable Systems (ST23; Bachelor, lecture).  |
| University of Arizona (US):               | International Environmental Policy and Governance (WT22; Master and PhD, seminar)  |
| University of Kassel (D):                 | Organic Food Processing (Since WT1999 each WT; Master, lecture and lab course).  |
| ETH Zurich (CH):                          | Sustainable Water Governance, Landscape and Environmental Planning (ST20; Master, lecture).  |
| University of Bern (CH):                  | Sustainability Governance Initiatives (WT18; Master, seminar). Theory and Empiricism: Tools of Science (ST19, ST18; Bachelor, lecture);  |
| Bern University of Applied Sciences (CH): | Chemistry (WT14, WT12, WT11, WT10, WT09, WT08; Bachelor, lecture). Milk Processing (WT12, WT11, WT10, WT09, WT08; Bachelor, lecture and lab course). Food Chemistry (ST12, ST11, ST10, ST09, ST08; Bachelor, lecture). Food Analysis (ST12, ST11, ST10, ST09, ST08; Bachelor, lab course). Molecular Cuisine (WT12, WT11, WT10, WT09, WT08; Bachelor, lecture and lab course). |

#### 6. Management and leadership

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| Since 2/2022      | Project leader “Sustainable resource governance under pressure: How to govern trade-off situations under global change”, Arizona State University, US; University of Bern, CH. |
| 01/2023 – 02/2024 | Group leader “ <a href="#">Transformation of social-ecological systems towards sustainability</a> ”. Arizona State University, US.   |

## 7. Membership in boards and scientific reviewing activities

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- 07/2023 - present      Co-chair, International Working Group “[Working Group on Governance of Social-Ecological Systems](#)”. Global research alliance Earth System Governance Project.
- 12/2011 – 12/2021      Scientific expert of the commission “Processing and trade of certified organic food” (MKV). Bio Suisse, Basel, CH.

### Scientific reviewing activities

Reviewer for scientific journals: Environmental Science and Policy, Ecology and Society, Sustainability Science, Journal of Environmental Management, International Journal of the Commons, Water Alternatives.

## 8. Active memberships in scientific societies

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[Earth System Governance Research Fellow Network](#).

[Working Group on Governance of Social-Ecological Systems](#). Earth System Governance.

[Taskforce on the Sustainable Development Goals](#). Earth System Governance.

[Taskforce on Knowledge Cumulation](#). Earth System Governance.

International Association for the Study of the Commons ([IASC](#)).

International Working Group on Archetype Analysis in Sustainability Research.

International Working Group on [Polycentric Governance](#).

New Institutional Economics (NIÖ) – Network.

## 9. Organization of conferences, sessions, and workshops

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- 10/2024      Organizer, panel “Progress and Prospects: Insights and Reflections from the Working Group on Governance of Social-Ecological Systems”, Conference on Earth System Governance, online.
- 06/2024      Co-organizer, panel, “Advancing knowledge about the fit between institutions and complex social-ecological systems”, Workshop on the Ostrom Workshop (WOW 7), Indiana University, Bloomington, US.
- 06/2024      Co-organizer, panel “Governance of mineral extraction for energy transition”, Workshop on the Ostrom Workshop (WOW 7), Indiana University, Bloomington, US.
- 06/2024      Organizer, panel “Governance of UNESCO World Heritage Sites”, Workshop on the Ostrom Workshop (WOW 7), Indiana University, Bloomington, US.
- 05/2022 – 10/2023      Organizer, international workshop series on the Social-Ecological Action Situations framework. Collaboration with the Stockholm Resilience Centre at the Stockholm University, SE. Online.
- 10/2023      Co-organizer, panel “Overcoming the dichotomy of humans and nature in Earth System Governance research (I): An innovative approach to address the complex, intertwined, and coevolving social-ecological nature of governance challenges”, Conference on Earth System Governance, Nijmegen, NL.
- 10/2023      Co-organizer, panel “Overcoming the dichotomy of humans and nature in Earth System Governance research (II): Navigating frameworks to study governance challenges in complex social-ecological systems”, Conference on Earth System Governance, Nijmegen, NL.

- 06/2023 Organizer, leader, workshop “How to (co-)manage complex social-ecological trade-off situations in protected areas through co-production processes?”, 2023 International Association for Society and Natural Resources (IASNR) Conference, Portland, Maine, US.
- 05/2023 Co-Organizer, workshop “The complex empirical realities of polycentric climate governance”, Wageningen University, NL.
- 03/2023 Organizer, leader, workshop “Governance of trade-off situations in protected areas: Using the Coupled Infrastructure System (CIS) Framework for analyzing and comparing three protected areas in the US”, 2023 Workshop on Behavior, Institutions, and the Environment, International Association for the Study of the Commons, Arizona State University, Tempe, US.
- 03/2023 Organizer, leader, workshop “Exploring conditions shaping the integration of Native American tribes in managing protected areas in the US”, 2023 Workshop on Behavior, Institutions, and the Environment, International Association for the Study of the Commons, Arizona State University, Tempe, US.
- 11/2022 Co-organizer and moderator, panel “Environmental governance as an example for space governance”, [Commons in Space Conference 2022](#), International Association for the Study of the Commons. Online.
- 10/2022 Discussant, panel “Analyzing polycentric climate networks”. Conference on Earth System Governance, Toronto, CAN.
- 08/2022 Co-chair, panel “Empirical and conceptual developments of polycentric climate governance” (with Paul Tobin). European Consortium for Political Research (ECPR) Conference, University of Innsbruck, AT.
- 04/2022 – 06/2022 Co-organizer and moderator [Polycentricity Webinar Series](#) on “Network of Action Situations Approaches”. Online.
- 12/2021 Co-organizer and moderator, workshop “CO<sub>2</sub>-neutral tourism region Oberland-Ost” with 40 regional stakeholders, University of Bern, Interlaken, CH.
- 06/2021 Organizer, leader, and moderator, workshop “Warning chain for Swiss severe weather events at the national, regional, and local level”, with 25 national and regional representatives and scientists, WSL, Zurich, CH.
- 05/2021 Co-organizer (Steering Committee) Polycentricity Conference 2021 Intern. Assoc. for the Study of the Commons (<https://2021polycentricity.iasc-commons.org>). Virtual.
- 02/2021 Moderator [Polycentricity Webinar Series](#). Virtual.
- 01/2021 Organizer, leader, and moderator, workshop “Governance gaps of two Water-Energy-Food Nexus case studies in Switzerland – What to do next?”, with representatives of the Federal Offices for Energy, Environment, and Agriculture, and scientists, CH. Virtual.
- 10/2020 Chair, panel “Governance of social-ecological systems”, Intern. Assoc. for the Study of the Commons. Meeting on “Institutional and Social-Ecological Systems Analysis”. Virtual.
- 10/2020 Organizer, leader, and moderator, workshop “Sustainable water solutions for the region”. Participants: municipalities Flims, Laax, and Falera, canton of Graubünden, environmental NGOs, Flims Electric AG, Weisse Arena AG. Laax, CH.
- 06/2020 Co-organizer and moderator, workshop “Ecological impact of multipurpose use of water reservoirs” (with WSL), Federal Offices for Energy, Environment, and Agriculture, CH. Virtual.
- 09/2019 Co-chair, panel "Renewable Energy: Impacts on Mountain environments and people" (with A. Bjørnsen and M. Lehning), International Mountain Conference, Innsbruck, AT.

- 03/2019 Co-organizer, workshop “Hydro-CH2018 Water Reservoirs” (with WSL), Federal Office for Environment, Bern, CH.
- 06/2018 Co-chair, panel "Alpine multi-purpose reservoirs: Future potential and relevance" (with WSL and Swiss Federal Office for Environment), Forum Alpinum, Breitenwang, AT.
- 03/2017 Co-organizer, workshop “Multi-purpose use of reservoirs and lakes: Challenges and opportunities" (with WSL), eco.naturkongress, Basel, CH.
- 2006 - 2007 Organizer of a steering group with participants from the business sector, for the development of a new course of study “Food Science and Management”. Bern University of Applied Sciences, CH.

## 10. Fellowships

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- 02/2022 – present Marie Curie Individual Global Fellowship. Project GOVTROFF “Sustainable resource governance under pressure: How to govern trade-off situations under global change”. European Commission, EU. Role: PI. EUR 278 840.
- 03/2024 – 06/2024 Ostrom Workshop Visiting Scholar Fellowship “How to find the balance? Governing trade-off situations in mining of transition metals for energy transformations”. Indiana University. Role: PI. Nominated by Prof. Marco Janssen and Prof. Jessica Steinberg. \$ 5 950.
- 05/2023 Travel Grant “Grand Canyon fieldwork”. School of Sustainability, Arizona State University, US. Role: PI, \$ 309.38.
- 01/2021 Paper Grant “The controversial debate on the role of water reservoirs in reducing water scarcity”. Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), CH. Role: PI, CHF 2,800.
- 01/2019 – 06/2021 Research Grant for Pilot Programme Adapting to Climate Change: “Multi-purpose reservoir Fuorela / Nagens for adapting to summer shortages”. Federal Office for the Environment (FOEN) and state and non-state project partners, CH. Role: Co-PI. CHF 250,000: FOEN; CHF 250,000: state and non-state project partners.
- 08/2019 – 10/2019 Research Grant “Multi-purpose reservoirs”. Institute of Geography, University of Bern, CH. Role: PI, CHF 15,000.
- 06/2019 Paper Grant “Social acceptance of a multi-purpose reservoir in a recently deglaciated landscape in the Swiss Alps”. Oeschger Centre for Climate Change Research, University of Bern, CH. Role: PI, CHF 1,700.
- 10/2018 Travel Award: Travel and participation at the conference “Workshop on the Ostrom Workshop 6 (WOW 6)”, Indiana University, Bloomington, IN, US. University of Bern, CH. Role: PI, CHF 1,700.
- 08/2016 – 07/2019 PhD Fellowship. Dr. Alfred Bretscher Fund for Environmental and Air Pollution, Oeschger Centre for Climate Change Research, University of Bern, CH.
- 01/2011 – 12/2011 Research Grant “Impact of homogenization on milk fat globules”. Swiss Confederation’s centre Agroscope Liebefeld, CH. Role: PI. CHF 50,000.
- 11/2009 – 12/2010 Research Grant “Separation of milk fat globules of different sizes by centrifugation”. Swiss Food Research, CH. Role: PI. CHF 15,000.

**11. Personal skills (language, digital competences)**

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| Languages         | German (native tongue), English  |
| Computer programs | Microsoft Word, Excel, and PowerPoint; Adobe Illustrator, InDesign, and Premiere Pro; MAXQDA |

**12. Career breaks**

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| 08/1999 - 06/2005 | Part-time maternity leave for my three children. |
| 08/1997 – 07/1998 | Maternity leave for my first child.              |

## Research output

### 1. Publications in peer-reviewed scientific journals

Carr Kelman, Candice; Srinivasan, Jaishri; Lorenzo Bajaj, Theresa; Aireona B. Raschke, Aireona B.; Brown-Wood, R. Nana; Ahn, Minwoo; Rebecca W. Kariuki, Rebecca W.; Simeone, Michael; **Kellner, Elke**; Schoon, Michael (**accepted**): Convergence research as transdisciplinary knowledge coproduction within cases of effective collaborative governance of social-ecological systems. In *Ecology and Society*.

**Kellner, Elke**; Petrovics, Daniel; Huitema, Dave (2024): Polycentric climate governance: The state, local action, democratic preferences, and power – emerging insights and a research agenda. In *Global Environmental Politics*. 24 (3), pp. 24–47. [DOI: 10.1162/glep\\_a\\_00753](https://doi.org/10.1162/glep_a_00753).

Tobin, Paul; Huitema, Dave; **Kellner, Elke** (2024): The Empirical Realities of Polycentric Climate Governance: Introduction to the Special Issue. In *Global Environmental Politics*. 24 (3), pp. 1–23. [DOI: 10.1162/glep\\_a\\_00758](https://doi.org/10.1162/glep_a_00758).

Partelow, Stefan; Villamayor-Tomas, Sergio; Eisenack, Klaus; Epstein, Graham; **Kellner, Elke**; Roggero, Matteo; Tschopp, Maurice (2024): A meta-analysis of SES framework case studies: Identifying dyad and triad archetypes. In *People and Nature*. [DOI: 10.1002/pan3.10630](https://doi.org/10.1002/pan3.10630).

Martin, Dominic A.; Pham-Truffert, Myriam; Gillham, Lara; Andriamihaja, Onintsoa Ravaka; Andriatsitohaina, R. Ntsiva N.; Diebold, Clara L.; Fulgence, Thio Rosin; **Kellner, Elke**; Llopis, Jorge C.; Messerli, Pete; Rakotomalala, Anjahanony A. N. A.; Raveloaritiana, Estelle; Wurz, Annemarie; Zaehring, Julie G.; Heinemann, Andreas (2024): Interactive visual syntheses for social-ecological systems understanding. *Socio-Environmental Systems Modelling*, 6, 18637. [DOI: 10.18174/sesmo.18637](https://doi.org/10.18174/sesmo.18637).

Baldwin, Elizabeth; Thiel, Andreas; McGinnis, Michael; **Kellner, Elke** (2023): Empirical research on polycentric governance: Critical gaps and a framework for studying long-term change. In *Policy Studies Journal*, Article psj.12518, pp. 1–30. [DOI: 10.1111/psj.12518](https://doi.org/10.1111/psj.12518).

**Kellner, Elke**; Martin, Dominic A. (2023): Learning from past coevolutionary processes to envision sustainable futures: Extending an action situations approach to the Water-Energy-Food nexus. In *Earth System Governance* 15, p. 100168. [DOI: 10.1016/j.esg.2023.100168](https://doi.org/10.1016/j.esg.2023.100168).

Kimmich, Christian; Ehlers, Melf-Hinrich; **Kellner, Elke**; Oberlack, Christoph; Thiel, Andreas; Villamayor-Tomas, Sergio (2023): Networks of action situations in social-ecological systems: current approaches and promising futures. In *Sustainability Science*. [DOI: 10.1007/s11625-022-01278-w](https://doi.org/10.1007/s11625-022-01278-w).

**Kellner, Elke** (2023): Identifying leverage points for shifting Water-Energy-Food nexus cases towards sustainability through the Networks of Action Situations approach combined with systems thinking. In: *Sustainability Science*. 1170. [DOI: 10.1007/s11625-022-01170-7](https://doi.org/10.1007/s11625-022-01170-7).

Kimmich, Christian; Villamayor-Tomas, Sergio; **Kellner, Elke**; Baldwin, B. Elizabeth; Oberlack, Christoph (2023): Networks of action situations: a systematic review of empirical research. Review. In: *Sustainability Science*. [DOI: 10.1007/s11625-022-01121-2](https://doi.org/10.1007/s11625-022-01121-2).

Hughes, Alice C.; Tougeron, Kévin; Martin, Dominic A.; Menga, Filippo; Rosado, Bruno H.P.; Villasante, Sebastian; Madgulkar, Shweta; Gonçalves, Fernando; Geneletti, Davide; Diele-Viegas, Luisa Maria; Berger, Sebastian; Colla, Sheila R.; Andrade Kamimura, Vitor de; Caggiano, Holly; Melo, Felipe; Oliveira Dias, Marcelo Guilherme de; **Kellner, Elke**; do Couto, Edivando Vitor (2023): Smaller human populations are still not a necessary condition for biodiversity conservation: A response to Cafaro et al. (2023). In *Biological Conservation*, p. 110053. [DOI: 10.1016/j.biocon.2023.110053](https://doi.org/10.1016/j.biocon.2023.110053).

Hughes, Alice C.; Tougeron, Kévin; Martin, Dominic A.; Menga, Filippo; Rosado, Bruno H.P.; Villasante, Sebastian; Madgulkar, Shweta; Gonçalves, Fernando; Geneletti, Davide; Diele-Viegas, Luisa Maria; Berger, Sebastian; Colla, Sheila R.; Andrade Kamimura, Vitor de; Caggiano, Holly; Melo, Felipe; Oliveira Dias, Marcelo Guilherme de; **Kellner, Elke**; do Couto, Edivando Vitor (2023): Smaller human populations are neither a necessary nor sufficient condition for biodiversity conservation. In *Biological Conservation* 277, p. 109841. [DOI: 10.1016/j.biocon.2022.109841](https://doi.org/10.1016/j.biocon.2022.109841).



Khan, Zarrar; XX; **Kellner, Elke**; XX (67 co-authors) (2022): Emerging themes and future directions of multi-sector nexus research and implementation”. Perspective. In: *Frontiers in Environmental Science*. 10, Article 918085. DOI: [10.3389/fenvs.2022.918085](https://doi.org/10.3389/fenvs.2022.918085).

**Kellner, Elke** (2021): The controversial debate on the role of water reservoirs in reducing water scarcity. In *WIREs Water*, e1514. DOI: [10.1002/WAT2.1514](https://doi.org/10.1002/WAT2.1514).

**Kellner, Elke**; Brunner, Manuela I. (2021): Reservoir governance in world’s water towers needs to anticipate multi-purpose use. In *Earth’s Future* 9, e2020EF001643. DOI: [10.1029/2020EF001643](https://doi.org/10.1029/2020EF001643).

Villamayor-Tomas, Sergio; Oberlack, Christoph; Epstein, Graham; Roggero, Matteo; Partelow, Stefan; **Kellner, Elke**; Tschopp, Maurice; Cox, Michael (2020): Using case study data to understand SES interactions: a model-centered metaanalysis of SES Framework applications. In: *Current Opinion in Environmental Sustainability* 44, pp. 48–57. DOI: [10.1016/j.cosust.2020.05.002](https://doi.org/10.1016/j.cosust.2020.05.002).

Kimmich, Christian; Ehlers, Melf-Hinrich; **Kellner, Elke**; Oberlack, Christoph; Thiel, Andreas; Villamayor-Tomas, Sergio (2020): Networks of action situations in social-ecological systems research. In: *Sustainability Science*. 90, p. 150. DOI: [10.1007/s11625-020-00814-w](https://doi.org/10.1007/s11625-020-00814-w).

**Kellner, Elke**; Oberlack, Christoph; Gerber, Jean-David (2019): Polycentric governance compensates for incoherence of resource regimes: The case of water uses under climate change in Oberhasli, Switzerland. In: *Environmental Science & Policy* 100, pp. 126–135. DOI: [10.1016/j.envsci.2019.06.008](https://doi.org/10.1016/j.envsci.2019.06.008).

**Kellner, Elke** (2019): Social acceptance of a multi-purpose reservoir in a recently deglaciated landscape in the Swiss Alps. In: *Sustainability* 11 (14), p. 3819. DOI: [10.3390/su11143819](https://doi.org/10.3390/su11143819).

**Kellner, Elke** (2019): Soziale Akzeptanz der Talsperre Trift in den Schweizer Alpen. In: *Wasserwirtschaft* 109 (5), pp. 26–29. DOI: [10.1007/s35147-019-0033-7](https://doi.org/10.1007/s35147-019-0033-7).

### **Special Issue (editor)**

Tobin, Paul; Huitema, Dave; **Kellner, Elke** (2024): The empirical realities of polycentric climate governance. [Special Issue](#) in *Global Environmental Politics*.

Kimmich, Christian; Ehlers, Melf-Hinrich; **Kellner, Elke**; Oberlack, Christoph; Thiel, Andreas; Villamayor-Tomas, Sergio (2023): Networks of action situations in social-ecological systems research. [Special Feature](#) in *Sustainability Science*.

### **2. Contributions to books**

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**Kellner, Elke** (2020): Mehrzweckspeicher zur Minderung von Wasserknappheit im Sommer. In: Emmanuel Reynard ; Dubois, Alan ; Borgeat Theler, Muriel (Eds.): *Le Rhône. Territoire, ressource et culture: Cahiers de Vallesia*. Sion (33rd ed., 177-184).

### **3. Peer-reviewed conference proceedings**

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**Kellner, Elke**; Brunner, Manuela I.; Björnsen Gurung, Astrid; Stähli, Manfred (2019): Verhandelbar? Neue Ansprüche an Schweizer Wasserspeicher. pp. 37-40. In: Swiss Federal Institute for Forest, Snow and Landscape Research WSL (Hg.): *Schweiz erneuerbar*. Birmensdorf, Switzerland ([WSL Berichte, 84](#)).

**Kellner, Elke** (2019): Factsheet: Multipurpose use of water and related management implications under a changing climate in high-mountain regions. In Yvonne Schaub, Alain Foehn, Javier Fluixá Sanmartín, Lucía Guardamino Soto (Eds.): [Multipurpose use of water and related management implications under a changing climate in high-mountain regions](#), pp. 72–73.

Bjørnsen Gurung, Astrid; Brunner, Manuela; Stähli, Manfred; **Kellner, Elke**; Clivaz, Melanie; Reynard, Emmanuel et al. (2018): Alpine multi-purpose reservoirs: Future potential and relevance. In Leopold Füreder, Rolf Weingartner, Kati Heinrich, Valerie Braun, Günter Köck, Klaus Lanz, Thomas Scheurer (Eds.): Alpine water - common good or source of conflicts? [Proceedings](#) of the ForumAlpinum 2018 and the 7th Water Conference. Breitenwand (Austria): Austrian Academy of Sciences Press, pp. 77–78.

**Kellner, Elke**; Oberlack, Christoph; Gerber, Jean-David (2018): Evolving polycentric climate governance: the Evolving polycentric climate governance: the case of multi-functional water use in Oberhasli, Switzerland. In Leopold Füreder, Rolf Weingartner, Kati Heinrich, Valerie Braun, Günter Köck, Klaus Lanz, Thomas Scheurer (Eds.): Alpine water - common good or source of conflicts? [Proceedings](#) of the ForumAlpinum 2018 and the 7th Water Conference. Breitenwand (Austria): Austrian Academy of Sciences Press, p. 79.

#### 4. Publications in not peer-reviewed journals and reports

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Newig, Jens; Rose, Michael; Aksoy, Zühre; Beaudoin, Simon; Bolognesi, Thomas; Fritsch, Oliver; Hegger, Dries L.T.; Hoffmann, Benjamin; Jager, Nicolas; **Kellner, Elke**; Leipold, Sina; Persson, Åsa; Runhaar, Hens A. C.; Webb, Bob (2022): To assess progress in the social sciences, we should study knowledge cumulation, not disruptiveness. In *SSRN Journal*. DOI: [10.2139/ssrn.4445549](https://doi.org/10.2139/ssrn.4445549).

Steeb, Nicolas; Badoux, Alexandre; Bialek, Roland; Bogner, Konrad; Hug Peter, Dorothea; **Kellner, Elke** Lienert, Christophe; Willemse, Saskia; Zappa, Massimiliano; Stähli, Manfred (2022): Vorhersage und Warnung von Unwettern in der Schweiz: Das Zusammenwirken von Bund und Kantonen anhand von zwei Fallbeispielen im Jahr 2020. In *Wasser Energie Luft* 114 (2), pp. 98–104.

Steeb, Nicolas; Badoux, Alexandre; **Kellner, Elke**; Bogner, Konrad; Hug Peter, Dorothea; Zappa, Massimiliano; Stähli, Manfred (2021): Analyse der Vorhersage und Warnkette anhand von zwei Unwetterereignissen im Jahr 2020. Starkniederschlagsereignisse vom 28. - 31. August und 1.-3. Oktober 2020. Edited by Eidgenössische Forschungsanstalt für Wald, Schnee, und Landschaft WSL. Birmensdorf, Schweiz, pp 51.

**Kellner, Elke**; Stähli, Manfred; Unterberger, Christian; Olschewski, Roland; Thür, Angela; Bjørnsen Gurung, Astrid (2021): Herausforderungen der Governance sowie der ökologischen, landschaftlichen und ökonomischen Auswirkungen von Mehrzweckspeichern. Hydro-CH2018 Projekt. Im Auftrag des Bundesamts für Umwelt (BAFU), Bern, Schweiz, 82 S. DOI: [10.5281/zenodo.4680488](https://doi.org/10.5281/zenodo.4680488).

**Kellner, Elke**; Weingartner, Rolf (2018): Chancen und Herausforderungen von Mehrzweckspeichern als Anpassung an den Klimawandel. In: *Wasser Energie Luft* 110 (2), pp. 101–107.

**Kellner, Elke** (2017): Evaluation der Sachplanung des Bundes. Bericht des Bundesrates in Erfüllung des Postulats 13.3461, Albert Vitali, vom 18.06.2013. Edited by Schweizerischer Bundesrat. Bundesamt für Raumentwicklung (ARE). Bern, Switzerland, pp 29.

**Kellner, Elke**; Dubas, Daniel (2016): Bericht zur Umsetzung der Strategie Nachhaltige Entwicklung 2012-2015. Edited by Bundesamt für Raumentwicklung (ARE). Bern, Switzerland, pp 19.

**Kellner, Elke**; Berger, Till; Dubas, Daniel (2015): Synthesebericht Stakeholder-Dialog. Im Rahmen der Erarbeitung der Strategie Nachhaltige Entwicklung 2016-2019. Edited by Bundesamt für Raumentwicklung (ARE). Bern, Switzerland, pp 81.

#### 5. Theses

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**Kellner, Elke** (2019): Multi-purpose reservoirs for alleviating water shortages: Opportunities and challenges in the governance processes to coordinate competing resource uses under climate change. PhD dissertation. Oeschger Centre for Climate Change Research. University of Bern, CH.

**Kellner, Elke** (2015): Möglichkeiten der Beeinflussung des Entscheidungsverhaltens bei ethischem Konsum am Beispiel Kaffee. BSc thesis. Sustainable Development. University of Bern, CH.

**Kellner, Elke (1997):** Characterization of two essential yeast proteins, Mrs5p and Mrs11p, in the mitochondrial intermembrane space. MSc thesis. Biozentrum, University of Basel, CH.

## 6. Presentations

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### Invited presentations

- 09/2024 *Governance interventions to balance trade-off situations between Sustainable Development Goals. The SDG Interaction Archetypes approach.* Center for Behavior, Institutions and the Environment, Arizona State University, US.
- 04/2024 *How to find the balance? Governing trade-off situations in mining of transition minerals for energy transition.* Ostrom Workshop. Research Seminar, Indiana University, US.
- 03/2024 *Using frameworks for analysing and modeling of social-ecological systems.* Seminar Series, University of Freiburg, DE.
- 01/2024 *How to govern conflictual trade-off situations between Sustainable Development Goals? Insights of two years of empirical research in the Southwest.* School of Sustainability Research Seminar, Arizona State University, US.
- 11/2023 *Passing the hot potato: Where to mine minerals for energy transition?* Commons in Space 2023 Conference. International Association for the Study of the Commons. Online.
- 05/2022 *Identifying leverage points for shifting Water-Energy-Food nexus cases towards sustainability through the Networks of Action Situations approach combined with systems thinking.* Polycentricity Webinar Series. Online.
- 04/2022 *Transformation of social-ecological systems under climate change in the European Alps.* Environmental Policy Course, University of Arizona, US.
- 03/2022 *Governance processes of trade-off situations in resource management to increase sustainable development.* Social Science Speaker Series, University of Arizona, US.
- 08/2021 *Mehrzweckspeicher als Anpassung an den Klimawandel?* Schlossmuseum Nidau, Nidau, CH.
- 06/2021 *Wasserspeicher im Zielkonflikt zwischen Minderung und Anpassung an den Klimawandel.* Strukturverbesserungstagung vom Bundesamt für Landwirtschaft und suissemelio. Virtual.
- 04/2021 *Governance of complex trade-offs between mitigation and adaptation in the Swiss Alps.* International Workshop Renewable Energy Transitions: Comparative Assessment in the Hindu Kush Himalayas, Andes and Alps. Himalayan University Consortium, Mountain Research Initiative (MRI), University of Arizona. Virtual.
- 03/2021 *(Un-)Sustainable water governance under climate change in Switzerland.* Sustainability Week Switzerland, University of Basel, CH.
- 10/2020 *Governance of multi-purpose use of water - Challenges and opportunities.* Hydro-CH2018 Meeting, Federal Office for Environment, Ittigen, CH.
- 12/2019 *Alpine Mehrzweckspeicher zur Minderung von Wasserknappheit im Sommer. Fallstudie im Berner Oberland und im Rhone-Gebiet.* 13<sup>ème</sup> colloque international sur le Rhône dans son environnement naturel et humain, L'Association Mémoires du Rhône, Sion, CH.
- 11/2019 *Neue Ansprüche an Schweizer Wasserspeicher.* Conference «Forum für Wissen», Birmensdorf, CH. [Film of the presentation.](#)

- 09/2019 *Social acceptance of a reservoir in a recently deglaciated landscape in the Swiss Alps.* International Mountain Conference, Innsbruck, AT.
- 04/2019 *Governance of resource uses under climate change. Focus on multipurpose (water) reservoirs as a measure for adaptation to climate change.* UNESCO Chair Meeting 2019 “Research on Cultural and Natural Heritage and Sustainable Mountain Development”, World Nature Forum WNF, Naters, CH.
- 03/2019 *Cooperation, competition and coercion in polycentric governance systems: The case of water-energy governance in Oberhasli, Switzerland.* International Research Workshop “Cooperation, competition and coercion in polycentric governance systems”, Centre for Global Cooperation Research, University Duisburg-Essen, DE.
- 06/2018 *Polycentric governance can compensate an incoherent regime under climate change. The case of multifunctional water use in Oberhasli, Switzerland.* Conference on multipurpose use of water. University of Zurich, together with CREALP, EPFL and Meteodat. Sion, CH.

### **Oral contributions to conferences**

- 10/2024 *Governance approaches to balance trade-off situations for sustainability transformations.* Wageningen Centre of Sustainability Governance (WCSG) Conference, Wageningen, NL.
- 10/2024 *Progress and Prospects: Insights and Reflections from the Working Group on Governance of Social-Ecological Systems.* Conference on Earth System Governance, online.
- 06/2024 *Cultural fit of institutions: A critical condition to make the 30 by 30 initiative successful.* Workshop on the Ostrom Workshop (WOW 7), Indiana University, Bloomington, US.
- 06/2024 *Challenges and opportunities of mineral extraction for energy transition on Indigenous land.* Workshop on the Ostrom Workshop (WOW 7), Indiana University, Bloomington, US.
- 06/2024 *Governance approaches to balance trade-off situations between Sustainable Development Goals and the Paris Climate Agreement. Insights from Chaco Culture National Historical Park, US.* Workshop on the Ostrom Workshop (WOW 7), Indiana University, Bloomington, US.
- 10/2023 *A review of frameworks to study complex social-ecological systems: Which framework is appropriate for which application?* Conference on Earth System Governance, Nijmegen, NL.
- 10/2023 *Comparing two action situation approaches to analyse the governance of trade-off situations between SDGs: A comparative case study of Grand Canyon and Chaco Culture National Park,* Conference on Earth System Governance, Nijmegen, NL.
- 06/2023 *Co-managing complex social-ecological trade-off situations in protected areas integrating indigenous and western scientific knowledge systems.* 2023 International Association for Society and Natural Resources (IASNR) Conference, Portland, Maine, US.
- 06/2023 *How to govern trade-off situations towards sustainability in UNESCO World Heritage Sites? Insights from Chaco Culture National Historical Park, US.* International Association for the Study of the Commons 2023 XIX Biennial Conference, Nairobi, KEN.
- 06/2023 *Co-producing conservation: Conditions shaping the integration of indigenous and western scientific knowledge systems in decision-making processes.* International Association for the Study of the Commons 2023 XIX Biennial Conference, Nairobi, KEN.
- 06/2023 *Critical research areas in polycentric climate governance - Insights of a systematic literature review.* International Association for the Study of the Commons 2023 XIX Biennial Conference, Nairobi, KEN.

- 05/2023 *Polycentric climate governance, democracy, power, scaling and the state – emerging insights from the literature.* Workshop on “The complex empirical realities of polycentric climate governance”, Wageningen University, NL.
- 05/2023 *Splintering Governance Temporalities in the Anthropocene: The Dynamics of Preservation, Conservation and Neo-colonialism at the UNESCO World Heritage Site of Chaco Canyon, US.* Workshop on “Laws and Times in Anthropocene Environments”, Tilburg University, NL.
- 10/2022 *Understanding past coevolutionary processes in social-ecological systems helps to envision pathways for sustainable futures: an action situations approach on Water-Energy-Food nexus.* Conference on Earth System Governance, Toronto, CAN.
- 08/2022 *Polycentric climate governance – insights of a systematic literature review.* European Consortium for Political Research (ECPR) Conference. University of Innsbruck, AT.
- 08/2022 *Identifying leverage points for transformation towards sustainability through the Networks of Action Situations approach combined with systems thinking.* European Consortium for Political Research (ECPR) Conference. University of Innsbruck, AT.
- 09/2021 *Institutional fit of polycentric governance systems under climate change.* Earth System Governance Conference. Virtual.
- 09/2021 *Analyzing cross-sectoral coordination gaps in water governance with a network approach.* European Consortium for Political Research (ECPR) Conference. Virtual.
- 07/2021 *From understanding to transformation: Reaching climate and sustainable development goals in complex social-ecological systems through a system-level network approach.* International Research Symposium: Evidence for Action; Aligning the Climate and SDG Agendas. Virtual.
- 04/2021 *Capturing WEF Nexus as a network phenomenon in social ecological systems.* European Geosciences Union (EGU) General Assembly. Virtual.
- 09/2020 *Provision of polycentric climate governance systems for institutional fit: Evidence from multifunctional water governance in Switzerland.* Earth System Governance Conference. Conference cancelled due to Covid-19.
- 09/2020 *Polycentricity and the study of Networks of Action Situations: Unpacking synergies.* Earth System Governance Conference. Conference cancelled due to Covid-19.
- 08/2020 *Analysing the Water-Energy-Food (WEF) nexus using the Network of Action Situations (NAS) approach.* European Consortium for Political Research (ECPR) Conference. Virtual.
- 05/2020 *Reservoirs in world’s water towers: Need for appropriate governance processes to reach Sustainable Development Goals.* European Geosciences Union (EGU) General Assembly. Virtual. [DOI: 10.5194/egusphere-egu2020-11004](https://doi.org/10.5194/egusphere-egu2020-11004).
- 09/2019 *Challenges of meeting lowland water demand through an upstream multi-purpose reservoir.* International Mountain Conference, Innsbruck, AT.
- 06/2019 *Emerging collective action to resolve sustainability trade-offs in polycentric governance systems: Evidence from Trift, Switzerland.* Workshop on the Ostrom Workshop 6 (WOW 6), Indiana University, Bloomington, IN, US.
- 06/2019 *Evolving polycentric governance processes can compensate incoherent resource regimes: Evidence of the canton of Bern, Switzerland.* Workshop on the Ostrom Workshop 6 (WOW 6), Indiana University, Bloomington, IN, US.

- 02/2019 *Implications of orchestration for polycentric governance systems. The case of multifunctional water use in the canton of Zurich, Switzerland.* New Institutional Economics (NIÖ) – Network Meeting 2019, University of Kassel, DE.
- 11/2018 *Adaptive capacity in processes of polycentric governance systems: The case of multifunctional water use in Switzerland.* 2018 Earth System Governance Conference, Utrecht, NL.
- 06/2018 *Evolving polycentric climate governance. The case of multifunctional water use in Oberhasli, Switzerland.* Forum Alpinum, Breitenwang, AT.
- 04/2018 *Polycentric climate governance: The case of multifunctional water reservoirs in the Swiss Alps.* Polycentric Climate Governance after Paris: Expectations, Challenges and Pathways, Freiburg, DE.
- 03/2018 *Evolving polycentric climate governance: The case of multifunctional water use in Oberhasli, Switzerland.* Governing Climate Change: Polycentricity in Action? Open University, Heerlen, NL.

## 7. Outreach activities

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- 06/2023 [Film](#) “Transformation of sustainability trade-offs in Chaco Canyon, New Mexico, US”.
- 09/2022 Contribution to the documentary film “A l’Ombre des Glaciers Alpins” (not publicly available). [Trailer](#).
- 08/2021 [Newspaper article](#): «Speicher könnten schwindendes Gletscherwasser ersetzen».
- 05/2021 [Podcast](#): Commoning #7: Polycentricity with Elke Kellner and Andreas Thiel.
- 04/2021 [Blog](#): Building new reservoirs can have unexpected consequences on water security.
- 03/2021 [Interview](#): Reservoir Governance in World’s Water Towers Needs to Anticipate Multi-Purpose Use.
- 03/2021 [Photo](#). Intertwinedness of social-ecological interactions. SNSF Scientific Image Competition 2021.
- 03/2021 [Film](#). Linked social-ecological-technological systems. SNSF Scientific Image Competition 2021.
- 03/2020 [Photo](#): Climate change, palpable. SNSF Scientific Image Competition 2020.
- 03/2020 [Film](#): Visible climate change. SNSF Scientific Image Competition 2020.
- 11/2019 Production of a film: “Multi-purpose reservoirs: Competing resource interests”. Personal use in presentations and lectures at university.
- 11/2019 Preparation of a presentation for Prof. Rolf Weingartner about my research results to an association of communities and farmers (Verein Zukunft Drei-Seen-Land). Kerzers, CH.
- 08/2018 – 09/2018 External expert consultancy to a private company (Lützel Schwab Consulting AG) regarding sustainable solutions for their products. Bern, CH.
- 09/2017 Invited presentation and discussant: “Opportunities of multi-purpose reservoirs”. Flims Electric AG, Weisse Arena AG. Laax, CH.
- 11/2017 – 01/2018 External expert consultancy to a high school of my residence on options to integrate education for sustainable development into their high school curriculum. Bern, CH.

- 02/2016 – 09/2016 Organizer, leader, and moderator of several workshops to evaluate the national spatial planning processes with state actors (national and cantonal administration) and non-state actors of different sectors, Bern, CH.
- 09/2016 Co-organizer “Forum for Sustainable Development” about “Sustainable Food Systems” (with Anne DuPasquier). Conference for decision-makers in municipalities, cities, cantons and regions in implementing sustainable development goals. Bern, CH.
- 09/2016 Organizer, Workshop “Nachhaltige Ernährung in städtischen Betreuungsangeboten”, Forum for Sustainable Development, Bern, CH.
- 09/2015 Co-organizer “Forum for Sustainable Development” about “Sustainable Urban Planning and Quality of Life” (with Anne DuPasquier). Conference for decision-makers in municipalities, cities, cantons and regions in implementing Sustainable Development Goals. Bern, CH.
- 2014 – 2015 Co-organizer of 27 half-day workshops with 150 stakeholders from civil society, business, science, the cantons and communes, and representatives of the Federal Administration for the renewal of the Swiss Sustainable Development Strategy 2016-2019 (with Daniel Dubas, Till Berger), Bern, CH.