

SYLLABUS: ENR 7425

Collective Action in Environmental Governance Spring 2024

Course Information

- **Course times:** 9:35-10:55am on Tuesdays and Thursdays
- **Course location:** 245 Kottman Hall
- **Credit hours:** 3
- **Mode of delivery:** In-person

Instructor

- **Name:** Dr. Matt Hamilton
- **Email:** hamilton.1323@osu.edu
- **Office location:** 320E Kottman Hall
- **Office hours:** Mondays from 1-2pm and by appointment
- **Preferred means of communication:**
 - My preferred method of communication for questions is **email**.
 - My class-wide communications will be sent through the Announcements tool in CarmenCanvas. Please check your [notification preferences](https://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to be sure you receive these messages.

Course Description

Collective action is a core concept in the field of environmental governance. Under what conditions do groups of actors (e.g., people, organizations) work together to achieve a common goal? How do actors navigate power asymmetries and uncertainty in such settings? How do interactions among actors facilitate or impede environmental problem solving? ENR 7425 examines dominant theories, frameworks, and methodological approaches that can help address these types of questions. The overarching goal of this course is to provide students with a set of perspectives and tools that they can readily apply to answer research questions and/or generate policy-relevant insight. The course will be divided into two parts. The first part will focus on theories and frameworks for understanding collective action in environmental governance. The second part will focus on tools and perspectives for analyzing collective action problems.



Learning Outcomes

By the end of this course, students should be able to:

- Demonstrate familiarity and fluency in the dominant literatures and empirical traditions relevant for understanding the causes and outcomes of collective action in environmental governance settings.
- Explain how scholarship on collective action has changed over the last several decades as well as key areas where important work remains to be done.
- Design applications of common methodological approaches used in research on collective action. Students will gain an appreciation for how different approaches or combinations of approaches can be applied to address different research questions.

Participation and Attendance Expectations

Participation: Students are expected to contribute constructively to class activities and discussions. Your participation will contribute to our collective understanding of topics. Students are especially encouraged to share insights about how discussion topics are related to their research or other work outside of class.

Attendance: Attendance is mandatory, and students are expected to contribute constructively to class activities and discussions.

Course Materials, Fees and Technologies

Required Materials and/or Technologies

- None. There is no textbook for the course. All readings will be posted to Carmen unless otherwise specified.

Required Equipment for accessing CarmenCanvas

- **Computer:** current Mac (MacOS) or PC (Windows 10) with high-speed internet connection
- **Other:** a mobile device (smartphone or tablet) to use for BuckeyePass authentication

If you do not have access to the technology you need to succeed in this class, review options for technology and internet access at go.osu.edu/student-tech-access.

Required Software

Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Visit the [installing Office 365](https://go.osu.edu/office365help) (go.osu.edu/office365help) help article for full instructions.

CarmenCanvas Access

You will need to use [BuckeyePass](https://buckeyepass.osu.edu) (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](https://go.osu.edu/add-device) (go.osu.edu/add-device) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- [Install the Duo Mobile application](https://go.osu.edu/install-duo) (go.osu.edu/install-duo) on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at [614-688-4357 \(HELP\)](tel:614-688-4357) and IT support staff will work out a solution with you.

Technology Skills Needed for This Course

- Basic computer and web-browsing skills
- [Navigating CarmenCanvas](https://go.osu.edu/canvasstudent) (go.osu.edu/canvasstudent)

Technology Support

For help with your password, university email, CarmenCanvas, or any other technology issues, questions or requests, contact the IT Service Desk, which offers 24-hour support, seven days a week.

- **Self Service and Chat:** go.osu.edu/it
- **Phone:** [614-688-4357 \(HELP\)](tel:614-688-4357)
- **Email:** servicedesk@osu.edu

Grading and Faculty Response



How Your Grade is Calculated

Assignment Category	Points
Participation	30
Précis (~1% each)	20
Research paper: Proposal, including detailed paper outline	15
Research paper: Presentation	10
Research paper: Final draft	25
Total	100

See [Course Schedule](#) for due dates.

Descriptions of Major Course Assignments

Participation (30%). To get full credit for participation, students must not only attend all classes but must also actively contribute to discussions. This requires reading all assigned material before each class. Additionally, during each class with assigned readings, one student will be a “facilitator” and another a “recorder”. Expectations will be discussed in class and posted on Carmen.

Précis: (~1% each; 20% collectively). Prior to each class meeting with assigned readings, students will submit a précis (a concise summary of the main ideas of each reading). Details and guidance on how to prepare a précis will be posted on Carmen.

Research paper (50%). Students will write a paper that applies theoretical frameworks and/or methodological approaches discussed in class to a topic that aligns with their own research interests. While not necessary, the paper may dovetail with thesis- or dissertation-related goals. The first part of this assignment involves developing a proposal for the research paper (15%), which includes a description of the topic and the scope of analysis, as well as a detailed outline. Based on feedback from the instructor, students will subsequently develop the proposal into a full-fledged paper (25%). Approximately one week before students submit papers, they will present their research in class (10%).

- Research paper proposal due at 11:55 pm on March 8
- Presentations will be held during the 25th and 26th class meetings (April 9 and 11)
- Research paper final draft due at 11:55 pm on April 26

Academic integrity and collaboration: Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in but no one else should revise or rewrite your work.

Late Assignments

The maximum grade of written assignments will decrease by 5% for each day late, including weekends. Late penalties will not be applied in cases of emergencies or other excused absences if documentation is provided. Please refer to Carmen for due dates. Due dates are set to help you stay on pace and to allow timely feedback that will help you complete subsequent assignments.

Instructor Feedback and Response Time

- **Preferred contact method:** If you have a question, please contact me first through my Ohio State email address. I will reply to emails within **24 hours on days when class is in session at the university**.
- **Class announcements:** I will send all important class-wide messages through the Announcements tool in CarmenCanvas. Please check [your notification preferences](https://go.osu.edu/canvas-notifications) (go.osu.edu/canvas-notifications) to ensure you receive these messages.
- **Grading and feedback:** For assignments submitted before the due date, I will try to provide feedback and grades within **seven days**. Assignments submitted after the due date may have reduced feedback, and grades may take longer to be posted.

Grading Scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E

Other Course Policies

Academic Integrity Policy

See [Descriptions of Major Course Assignments](#) for specific guidelines about collaboration and academic integrity in the context of this class.

Ohio State's Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university's [Code of Student Conduct](#) (studentconduct.osu.edu), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the university's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- [Committee on Academic Misconduct](http://go.osu.edu/coam) (go.osu.edu/coam)
- [Ten Suggestions for Preserving Academic Integrity](http://go.osu.edu/ten-suggestions) (go.osu.edu/ten-suggestions)
- [Eight Cardinal Rules of Academic Integrity](http://go.osu.edu/cardinal-rules) (go.osu.edu/cardinal-rules)

Copyright for Instructional Materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes

associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may

lead to diminished academic performance or reduce a student's ability to participate in daily activities. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, [on-demand mental health resources](https://go.osu.edu/ccsondemand) (go.osu.edu/ccsondemand) are available. You can reach an on-call counselor when CCS is closed at [614- 292-5766](tel:614-292-5766). **24-hour emergency help** is available through the [National Suicide Prevention Lifeline website](https://suicidepreventionlifeline.org) (suicidepreventionlifeline.org) or by calling [1-800-273-8255\(TALK\)](tel:1-800-273-8255). [The Ohio State Wellness app](https://go.osu.edu/wellnessapp) (go.osu.edu/wellnessapp) is also a great resource.

Accessibility Accommodations for Students with Disabilities

Requesting Accommodations

The university strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability including mental health, chronic or temporary medical conditions, please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with [Student Life Disability Services \(SLDS\)](https://slds.osu.edu). After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services.

Disability Services Contact Information

- Phone: [614-292-3307](tel:614-292-3307)
- Website: slds.osu.edu
- Email: slds@osu.edu
- In person: [Baker Hall 098, 113 W. 12th Avenue](#)

Accessibility of Course Technology

This course requires use of CarmenCanvas (Ohio State's learning management system). If you need additional services to use these technologies, please request accommodations as early as possible.

- [CarmenCanvas accessibility](https://go.osu.edu/canvas-accessibility) (go.osu.edu/canvas-accessibility)

Course Schedule

Refer to the CarmenCanvas course for up-to-date due dates.

Week	Class	Topic and Readings
Part 1: Theories and frameworks to understand collective action in environmental governance		
1	1 Jan 9	Introductions and students sign up for leading discussions <u>Readings:</u> none
	2 Jan 11	Collective action problems as social dilemmas <u>Required reading:</u> Ostrom, Elinor. Governing the commons. Cambridge university press, 2015. <i>Chapter 1 ("Reflections on the Commons")</i> . <u>Recommended reading:</u> Olson, Mancur. The Logic of Collective Action. Harvard University Press, 1965. <i>Chapters 1 (sections: pp 5-16 and 33-52) and 2 ("A theory of Groups and Organizations" and "Group Size and Group Behavior")</i>
2	3 Jan 16	Collective action and property rights <u>Required reading:</u> Agrawal, Arun, and Elinor Ostrom. "Collective action, property rights, and decentralization in resource use in India and Nepal." <i>Politics & Society</i> 29.4 (2001): 485-514. <u>Recommended reading:</u> Ostrom, E. 2003. How types of goods and property rights jointly affect collective action. <i>Journal of Theoretical Politics</i> 15 (3): 239-270. Galik, G. and P. Jagger. 2015. Bundles, duties and rights: A revised framework for analysis of natural resource property rights regimes. <i>Land Economics</i> 91(1):76-90.
	4 Jan 18	Rational choice perspectives and assumptions <u>Required reading:</u> Ostrom, Elinor. "A behavioral approach to the rational choice theory of collective action: Presidential address, American Political Science Association, 1997." <i>American political science review</i> 92.1 (1998): 1-22. <u>Recommended reading:</u> Alchian, A. 1950. Uncertainty, Evolution and Economic Theory. <i>Journal of Political Economy</i> 63:211-21.
3	5 Jan 23	Bounded rationality <u>Required reading:</u> Simon, Herbert A. "Decision making: Rational, nonrational, and irrational." <i>Educational Administration Quarterly</i> 29.3 (1993): 392-411. <u>Recommended reading:</u> Simon, Herbert A. "Bounded rationality and organizational learning." <i>Organization science</i> 2.1 (1991): 125-134. Boyd, Robert, and Peter J. Richerson. "Norms and bounded rationality." <i>Bounded rationality: The adaptive toolbox</i> (2001): 281-296.
	6	Theories of policy learning



	Jan 25	<p><u>Required reading:</u> Gerlak, Andrea K., and Tanya Heikkila. "Building a theory of learning in collaboratives: evidence from the Everglades Restoration Program." <i>Journal of Public Administration Research and Theory</i> 21.4 (2011): 619-644.</p> <p><u>Recommended reading:</u> Sabatier, Paul A. "An advocacy coalition framework of policy change and the role of policy-oriented learning therein." <i>Policy sciences</i> 21.2-3 (1988): 129-168.</p> <p>Newig, Jens, Dirk Günther, and Claudia Pahl-Wostl. "Synapses in the network: learning in governance networks in the context of environmental management." <i>Ecology and Society</i> 15.4 (2010).</p> <p>Pahl-Wostl, Claudia. "A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes." <i>Global Environmental Change</i> 19.3 (2009): 354-365.</p>
4	7 Jan 30	<p>Actor-level strategies (I): costs and payoffs</p> <p><u>Required reading:</u> McCann, Laura. "Transaction costs and environmental policy design." <i>Ecological Economics</i> 88 (2013): 253-262.</p> <p><u>Recommended reading:</u> Coase, R.H. (1937), <i>The Nature of the Firm</i>, <i>Economica</i> 4, pp386-405 North, Douglass C. "A transaction cost theory of politics." <i>Journal of theoretical politics</i> 2.4 (1990): 355-367.</p>
	8 Feb 1	<p>Actor-level strategies (II): costs and payoffs</p> <p><u>Required reading:</u> Berardo, Ramiro, and John T. Scholz. "Self-organizing policy networks: Risk, partner selection, and cooperation in estuaries." <i>American Journal of Political Science</i> 54.3 (2010): 632-649.</p> <p><u>Recommended reading:</u> Leifeld, Philip, and Volker Schneider. "Information exchange in policy networks." <i>American Journal of Political Science</i> 56.3 (2012): 731-744.</p>
5	9 Feb 6	<p>Macro-level perspectives on social capital</p> <p><u>Required reading:</u> Adger, W. Neil. "Social capital, collective action, and adaptation to climate change." <i>Economic geography</i> 79.4 (2003): 387-404.</p> <p><u>Recommended reading:</u> Bowles, Samuel, and Herbert Gintis. "Social capital and community governance." <i>The economic journal</i> 112.483 (2002): F419-F436. Onyx, Jenny, and Paul Bullen. "Measuring social capital in five communities." <i>The journal of applied behavioral science</i> 36.1 (2000): 23-42.</p>
	10 Feb 8	<p>Micro-level perspectives on social capital</p> <p><u>Required reading:</u> Coleman, James S. "Social capital in the creation of human capital." <i>American journal of sociology</i> 94 (1988): S95-S120.</p> <p><u>Recommended reading:</u></p>

		<p>Burt, Ronald S. "The social capital of structural holes." <i>The new economic sociology: Developments in an emerging field</i> 148 (2002): 190.</p> <p>Robins, Garry, Lorraine Bates, and Philippa Pattison. "Network governance and environmental management: conflict and cooperation." <i>Public Administration</i> 89.4 (2011): 1293-1313.</p>
6	11 Feb 13	<p>Social norms for collective action embedded in culture and rituals</p> <p><u>Required reading:</u> Lansing, J. Stephen, and James N. Kremer (1993) Emergent properties of Balinese water temples. <i>American Anthropologist</i> 95:97–114.</p> <p><u>Recommended reading:</u> Colding, J. and C. Folke (2001) Social taboos: "Invisible" systems of local resources management and biological conservation. <i>Ecological Applications</i> 11(2): 584-600</p> <p>Anderies, John M. (1998) Culture and human agro-ecosystem dynamics: The Tsembaga of New Guinea, <i>Journal of Theoretical Biology</i> 192(4): 515-530</p>
	12 Feb 15	<p>Organizational structures</p> <p><u>Required reading:</u> Masuda, Yuta J., et al. "Innovation diffusion within large environmental NGOs through informal network agents." <i>Nature Sustainability</i> 1.4 (2018): 190-197.</p> <p><u>Recommended reading:</u> Putterman, L. 1995. Markets, Hierarchies, and Information: On a Paradox in the Economics of Organization. <i>Journal of Economic Behavior and Organization</i> 26:373-90.</p> <p>Ménard, Claude. "A new institutional approach to organization." <i>Handbook of new institutional economics</i>. Springer, Boston, MA, 2005. 281-318.</p> <p>Miller, Gary J. "Solutions to principal-agent problems in firms." <i>Handbook of new institutional economics</i>. Springer, Boston, MA, 2005. 349-370.</p>
7	13 Feb 20	<p>Institutional Analysis and Development Framework</p> <p><u>Required reading:</u> Ostrom, Elinor. "Background on the institutional analysis and development framework." <i>Policy Studies Journal</i> 39.1 (2011): 7-27.</p> <p><u>Recommended reading:</u> Ostrom, Elinor. <i>Governing the commons</i>. Cambridge university press, 2015. <i>Chapters 2 ("An Institutional Approach to...")</i></p> <p>Ostrom, Elinor. <i>Understanding institutional diversity</i>. Princeton university press, 2009. <i>Chapter 4 ("Animating Institutional Analysis")</i></p>
	14 Feb 22	<p>"Horizontally" interdependent institutions and collective action problems</p> <p><u>Required reading:</u> Lubell, Mark. "Governing institutional complexity: The ecology of games framework." <i>Policy Studies Journal</i> 41.3 (2013): 537-559.</p> <p><u>Recommended reading:</u></p>

		<p>Ostrom, Elinor. "Beyond markets and states: polycentric governance of complex economic systems." <i>American economic review</i> 100.3 (2010): 641-72.</p> <p>McGinnis, Michael D. "Networks of adjacent action situations in polycentric governance." <i>Policy Studies Journal</i> 39.1 (2011): 51-78.</p>
8	15 Feb 27	<p>“Vertically” interdependent institutions and collective action problems</p> <p><u>Required reading:</u></p> <p>Wyborn, Carina, and R. Patrick Bixler. "Collaboration and nested environmental governance: scale dependency, scale framing, and cross-scale interactions in collaborative conservation." <i>Journal of Environmental Management</i> 123 (2013): 58-67.</p> <p><u>Recommended reading:</u></p> <p>Adger, W. Neil, Katrina Brown, and Emma L. Tompkins. "The political economy of cross-scale networks in resource co-management." <i>Ecology and society</i> 10.2 (2005).</p> <p>Carlsson, Lars, and Fikret Berkes. "Co-management: concepts and methodological implications." <i>Journal of environmental management</i> 75.1 (2005): 65-76.</p>
	16 Feb 29	<p>Frameworks for understanding temporal dynamics of collective action</p> <p><u>Required reading:</u></p> <p>Roland, G. 2004. Understanding institutional change: fast moving and slow moving institutions. <i>Studies in Comparative International Development</i> 38(4):109-131.</p> <p><u>Recommended reading:</u></p> <p>van den Bergh, J.C.J.M., and S. Stagl. 2003. Coevolution of economic behavior and institutions: towards a theory of institutional change. <i>Journal of Evolutionary Economics</i> 13(3): 289–317.</p> <p>Weber, E.P., N. P. Lovrich, and M. Gaffney. 2005. "Collaboration, enforcement, and endangered species: A framework for assessing collaborative problem-solving capacity." <i>Society and Natural Resources</i> 18: 677–698.</p> <p>Casari, M. 2007. Emergence of endogenous legal institutions: property rights and community governance in the Italian Alps. <i>Journal of Economic History</i> 67(1): 191-266.</p>
Part 2: Tools and perspectives for analyzing collective action problems		
9	17 Mar 5	<p>Game theory</p> <p><u>Required reading:</u></p> <p>Gibbons, Robert. "An introduction to applicable game theory." <i>Journal of Economic Perspectives</i> 11.1 (1997): 127-149.</p> <p><u>Recommended reading:</u></p> <p>Gintis, Herbert. <i>Game theory evolving: A problem-centered introduction to modeling strategic behavior</i>. Princeton university press, 2000. <i>Chapter 1 (“Game Theory: A Lexicon for Strategic Interaction”)</i></p> <p>Güth, Werner. 1991. Game Theory’s Basic Question—Who is a Player?: Examples Concepts and Their Behavioral Relevance. <i>Journal of Theoretical Politics</i> (October): 403-36.</p>

	18 Mar 7	<p>Network science perspectives on collective action (macro-level)</p> <p><u>Required reading:</u> Bodin, Örjan, and Beatrice I. Crona. "The role of social networks in natural resource governance: What relational patterns make a difference?" <i>Global environmental change</i> 19.3 (2009): 366-374.</p> <p><u>Recommended reading:</u> O'Toole Jr, Laurence J. "Treating networks seriously: Practical and research-based agendas in public administration." <i>Public administration review</i> (1997): 45-52. Carlsson, Lars. "Policy networks as collective action." <i>Policy studies journal</i> 28.3 (2000): 502-520.</p>
10	19 Mar 19	<p>Network science perspectives on collective action (micro-level)</p> <p><u>Required reading:</u> Bodin, Örjan, et al. "Theorizing benefits and constraints in collaborative environmental governance: a transdisciplinary social-ecological network approach for empirical investigations." <i>Ecology and Society</i> 21.1 (2016).</p> <p><u>Recommended reading:</u> Sayles, Jesse S., and Jacopo A. Baggio. "Who collaborates and why: Assessment and diagnostic of governance network integration for salmon restoration in Puget Sound, USA." <i>Journal of environmental management</i> 186 (2017): 64-78. McAllister, Ryan RJ, Rod McCrea, and Mark N. Lubell. "Policy networks, stakeholder interactions and climate adaptation in the region of South East Queensland, Australia." <i>Regional Environmental Change</i> 14.2 (2014): 527-539. Jasny, Lorien, Michelle Johnson, Lindsay Campbell, Erika Svendsen, and Josh Redmond. "Working Together: The Roles of Geographic Proximity, Homophilic Organizational Characteristics, and Neighborhood Context in Civic Stewardship Collaboration Networks in Philadelphia and New York City." <i>Ecology and Society</i> 24, no. 4</p>
	20 Mar 21	<p>Mental models and social cognition</p> <p><u>Required reading:</u> Jones, Natalie A., et al. "Mental models: an interdisciplinary synthesis of theory and methods." <i>Ecology and Society</i> 16.1 (2011).</p> <p><u>Recommended reading:</u> Gray, Steven A., et al. "Mental modeler: a fuzzy-logic cognitive mapping modeling tool for adaptive environmental management." <i>System sciences (hicss)</i>, 2013 46th Hawaii international conference on. IEEE, 2013. Levy, Michael A., Mark N. Lubell, and Neil McRoberts. "The structure of mental models of sustainable agriculture." <i>Nature Sustainability</i> 1.8 (2018): 413.</p>
11	21 Mar 26	<p>Computational modeling</p> <p><u>Required reading:</u> An, Li. "Modeling human decisions in coupled human and natural systems: review of agent-based models." <i>Ecological Modelling</i> 229 (2012): 25-36.</p> <p><u>Recommended reading:</u></p>

		<p>Smajgl, Alex, et al. "Empirical characterisation of agent behaviours in socio-ecological systems." <i>Environmental Modelling & Software</i> 26.7 (2011): 837-844.</p> <p>Naivinit, Warong, et al. "Participatory agent-based modeling and simulation of rice production and labor migrations in Northeast Thailand." <i>Environmental Modelling & Software</i> 25.11 (2010): 1345-1358.</p>
	22 Mar 28	<p>Experiments in the lab and field (I)</p> <p><u>Required reading:</u> Ostrom, Elinor. "The value-added of laboratory experiments for the study of institutions and common-pool resources." <i>Journal of Economic Behavior & Organization</i> 61.2 (2006): 149-163.</p> <p><u>Recommended reading:</u> Coleman, Eric, and Elinor Ostrom. "Experimental contributions to collective action theory." <i>Cambridge handbook of experimental political science</i> 339 (2011).</p> <p>Croson, R. 2002. Why and how to experiment: Methodologies from experimental economics, <i>University of Illinois Law Review</i> (4): 921-945 2002</p>
12	23 Apr 2	<p>Experiments in the lab and field (II)</p> <p><u>Required reading:</u> Cardenas, Juan-Camilo. "How do groups solve local commons dilemmas? Lessons from experimental economics in the field." <i>Environment, development and sustainability</i> 2.3-4 (2000): 305-322.</p> <p><u>Recommended reading:</u> Anderies et al, 2012. The challenge of understanding decisions in experimental studies of common pool resources, <i>Ecological Economics</i>, 70(9): 1571-1579.</p> <p>Henrich J, Boyd R, Bowles S, Camerer C, Fehr E, Gintis H, McElreath R, Alvard M, Barr A, Ensminger J, Henrich NS, Hill K, Gil-White F, Gurven M, Marlowe FW, Patton JQ, Tracer D (2005) "Economic man" in cross-cultural perspective: Behavioral experiments in 15 small-scale societies, <i>Behavioral and Brain Sciences</i> 28 (6): 795-815</p>
	24 Apr 4	<p>Analyzing rules for collective action</p> <p><u>Required reading:</u> Siddiki, Saba, et al. "Dissecting policy designs: An application of the institutional grammar tool." <i>Policy Studies Journal</i> 39.1 (2011): 79-103.</p> <p><u>Recommended reading:</u> Crawford, Sue ES, and Elinor Ostrom. "A grammar of institutions." <i>American Political Science Review</i> 89.3 (1995): 582-600.</p> <p>Schlager, Edella, and Tanya Heikkila. "Resolving water conflicts: a comparative analysis of interstate river compacts." <i>Policy Studies Journal</i> 37.3 (2009): 367-392.</p>
13	25 Apr 9	Research presentations (I)
	26 Apr 11	Research presentations (II)



14	27 Apr 16	<p>Engaged research</p> <p><u>Required reading:</u> Balazs, Carolina L., and Rachel Morello-Frosch. "The Three Rs: How Community-Based Participatory Research Strengthens the Rigor, Relevance, and Reach of Science." <i>Environmental Justice</i> 6, no. 1 (2013): 9–16. https://doi.org/10.1089/env.2012.0017.</p> <p><u>Recommended reading:</u> Sutherland, William J., Gorm Shackelford, and David Christian Rose. "Collaborating with Communities: Co-Production or Co-Assessment?" <i>Oryx</i> 51, no. 4 (2017): 569–70. https://doi.org/10.1017/S0030605317001296. Beier, Paul, Lara J. Hansen, Lynn Helbrecht, and David Behar. "A How-to Guide for Coproduction of Actionable Science." <i>Conservation Letters</i> 10, no. 3 (2017): 288–96. https://doi.org/10.1111/conl.12300.</p>
	28 Apr 18	<p>The state of the science on collective action in environmental governance and directions for future research</p> <p><u>Required reading:</u> Bodin, Örjan. "Collaborative environmental governance: Achieving collective action in social-ecological systems." <i>Science</i> 357.6352 (2017): eaan1114.</p> <p><u>Recommended reading:</u> Dolšak, Nives, and Aseem Prakash. "The politics of climate change adaptation." <i>Annual Review of Environment and Resources</i> 43 (2018):317-341. Nyborg, Karine. "Social norms and the environment." <i>Annual Review of Resource Economics</i> 10 (2018): 405-423.</p>