PUP 3204H - Honors Sustainability

Section: 0201

College of Sciences

School of Politics, Security, and Intl Affairs

Course Information

Term: Spring 2026
Class Meeting Days: MW
Class Meeting Time: 02:30PM - 03:50PM
Class Meeting Location: TCH 0103
Modality: P
Credit Hours: 3.00

Instructor Information

Name: Jacopo Baggio
Title: Dr
Office Location: HPH 302
Office Hours
Monday 12 pm - 1.30 pm and Wednesday 12 pm to 1.30pm, Virtual hours are possible only by appointment. Other times are possible by appointment.
Email: Jacopo.Baggio@ucf.edu

Course Description

PUP 3204H COS-POLS 3(3,0)Honors Sustainability: PR: ENC 1102 and Consent of Honors, or CI Environmental politics through the lens of sustainability. Attention devoted to the relationships of culture, economics, and ecology. Occasional.

This course is divided into two sections touched upon each week. In the first section of the week lecture style presentations will be given and aimed to equip students with theories and frameworks that are apt to analyze current issues related to sustainability. The second weekly section is student led and relates to putting into practice the lecture and reading materials and contextualize it with examples related to sustainability.

During the course, the students will become acquainted with the different conceptualization and frameworks related to the analysis of common pool resources, resilience and social ecological systems. These conceptualization will allow students to analyze, assess and discuss several sustainability problems such as biodiversity, climate change, energy etc.

Student Learning Outcomes

A student who has passed the course will be able to

Knowledge: Have knowledge of the different frameworks and theories applied to assess and solve complex environmental issues from a social-ecological perspective. This will include an in-depth knowledge about social dilemmas and collective action as well as managing common pool resources, resilience, adaptive management and co-management in social-ecological systems.

Competence and skills: Compare and critically assess the different theories and frameworks proposed and use the appropriate lens to assess and find solutions to current issues in environmental politics. Further, students, via independent work, will need to learn to plan and conduct a mini-research project leading to two presentations and one final essay. They will, hence, have to produce a written piece of work following standards observed for submission to peer-reviewed journals, including proper citation and use of references.

Required Course Materials and Resources

No book is necessary for this course

Course Assessment and Grading Procedure

Course Activities

- Discussing current issues in class weekly on Thursday
- Two full presentations
- One Final Essay
- Extra credit will be provided if students decide to participate in a behavioral experiment or complete an alternative 1 page assignment on the value of games (paper or computer based) in promoting sustainability.

More in detail:

Course Activities

Discussion Assessment: Discussion (30 points)

During the course you will be required to discuss the weekly topic. Discussion takes the following form:

- You will auto-select groups that will discuss specific weekly topics. (if auto-selection is not possible I will assign you in groups)
- Each group will need to submit written highlights of the in-class discussion.

Discussions should:

Critically assess the topic assigned. You can use a power point or not. You are free to discuss the topic via role-playing, doing games, acting, video or other means that you think are best for information retention and understanding the topic concepts. You are encouraged to search for critiques/validation of the topic/papers assigned. Generally you should Outline the relative strengths or weaknesses of the topics and papers. As a guide, you can think of trying to concentrate on the following questions:

- What question are being addressed?

- What are the method/approaches used? (Data, case study, experiment, model, pure theory etc.)
- What is the motivation? (why do we care?)
- Are the method employed appropriate?
- Do the assumptions made about a specific topic match the world we see?
- What are the main features/highlights of a specific topic and how can it be applied to real world examples?
- How were the results derived or computed?
- What is the general context and can it be applied to specific examples? (choose the examples)
- What are limitations and how can we improve upon them?

First Presentation (20 points) –

The first presentation should include a research question you are interested in (or problem statement) related to sustainability.

During the first presentation you are expected to synthetize and apply appropriately the different theories/frameworks learned in class to the problem of your choice. You should make appropriate references to the literature and clarify assumptions underlying your choices. You should be able to also present how you intend to proceed to address the research question/problem statement you are proposing.

Remember:

- Presentation cannot be longer than 5 minutes (and they will be timed, going over time will result in a penalization in points).
- Topic of the presentation is a topic of your choice, but it should be related to your final project.
- The first presentation should aim to clarify: Literature (theories/frameworks), research question and assumptions as well as methods that you intend to use for your final paper.

Second Presentation (20 points)

The second presentation should actually be akin your final paper and should present it, as you would at a conference. Hence this presentation implies that you will have a

specific motivation for the research you are presenting, a clear problem statement/research question, a clear background, clear methods and analysis as well as results and discussion and implications for the policy/political arena. You should incorporate feedback received during your first presentation.

Remember:

- Presentation cannot be longer than 5 minutes (and they will be timed, going over time will result in a penalization in points).
- Topic of the presentation should be related to your final project and to your first presentation.
- Incorporate feedback from the first presentation.
- This second presentation should aim to present your final paper. Hence you should be able to coherently argue on the topic of your choice.

Final Paper (30 points)

The final project is due the last week of class (or week 16)

- The final project can be discussed with me at any time during the course. If you have your own topic, we will work on that, if not, you can choose any topic covered during the course or you will be assigned one.
- The final project has to showcase your ability to coherently write a paper that, if done well, can lead to a “submission for a peer review journal”. It has to involve an in-depth analysis of a topic of your choice that you have learned during the semester.
- The final project is an individual project.
- Your final project must consist of a thoughtful analysis on a topic of your choice:
- The final research project paper should contain a brief literature review on the topic you are working on, description of the analysis and justifying your choices and assumptions, results, limitations, discussion and conclusion.
- **You are not allowed to use quotes,** and the essay will be submitted via Turn-It-In.
- You need to cite at least 10 peer review articles that deal with the topic of your choice.
- APA style is required as well as proper citation.

The essay must be at least 2000 words, not to exceed 2500 words without counting references.

Activity Submissions

Assignments must be submitted via Webcourses@UCF.

Grading Scale

Grading Scale

Letter Grade	Percentage
A	93-100%
A-	90-93%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	70-76%
D	60-69%
F	0-59%

Consult the latest Undergraduate or Graduate catalog for regulations and procedures regarding grading such as Incomplete grades, grade changes, and grade forgiveness.

Policies for Course Grade

Expectations

It is expected that students read the material provided. Students should engage with **all the material provided and are strongly encouraged to search for additional materials**. In other words:

- Read the text assigned, think and critically assess the readings,

- Search for papers assigned and other that are important for your essay / presentation.
- Prepare for and participate in the weekly discussions.
- Read the material
- Turn in the assignments on time.

In this course we will utilize turnitin.com, an automated system which instructors can use to quickly and easily compare each student's assignment with billions of web sites, as well as an enormous database of student papers that grows with each submission. Accordingly, you will be expected to submit assignments through the Canvas Assignment Tool in electronic format. After the assignment is processed, as an instructor I receive a report from turnitin.com that states if and how another author's work was used in the assignment. For a more detailed look at this process, visit http://www.turnitin.com .

Grades

A maximum of 105 points is given in this course. You will be evaluated via 2 presentations, 1 final essays, and weekly discussions. Essay and presentation will assess your ability to critically think and engage with the material proposed as well as searching for material other than the one presented in class. Weekly seminars are built to assess and discuss current issues related to sustainability based on the topics presented on Tuesdays.

Excusable late assignments and make up work conditions: Only for medical reasons or for UCF excusable events.

Late assignments: Late not-excused assignments will be penalized 1 point every 6 hours, after 48hr passed the deadline, assignments will not be considered and evaluated 0 points.

Details of the presentations and essays will be discussed via Webcourses@UCF (Canvas) conversation boards and/or during office hours.

Make-up Exams and Assignments

Per university policy, you are allowed to submit make-up work (or an equivalent, alternate assignment) for authorized university-sponsored activities, religious observances, or legal obligations (such as jury duty). If this participation conflicts with your course assignments, I will offer a reasonable opportunity for you to complete missed assignments and/or exams. The make-up assignment and grading scale will be equivalent to the missed assignment and its grading scale. In the case of an authorized university activity, it is your responsibility to show me a signed copy of the Program Verification Form for which you will be absent, prior to the class in which the absence occurs. In any of these cases, please contact me ahead of time to notify me of upcoming needs.

Assessment and Grading Procedures

The table shows the weight distribution for each assignment.

Assignment	**Percentage of Grade**
In Class Discussions	30
Extra Credit Activity	5
Presentation 1	20
Presentation 2	20
Essay Project	30
Total	105

Artificial Intelligence (AI) Use Policy

- If you choose to use Gen AI (with consequences for your learning abilities and ability to critically engage with the content of this course) you must disclose specifically where and how it was used in the process of completing the

assignment. It should also be cited. For example, text generated from Copilot should include a citation such as: “Copilot. Accessed 2023-12-03. Prompt: ‘Summarize the Geneva Convention in 50 words.’ Generated using Copilot.” Any attempt to represent GenAI output inappropriately as your own work will be treated as plagiarism. Ultimately, students are responsible for the accuracy and veracity of submitted work whether AI-generated or not.

Disability Access & Accommodations

The University of Central Florida is committed to providing equal access to all students with disabilities (ADHD, learning disabilities, Autism, chronic medical conditions, physical disabilities, etc.). To receive consideration for reasonable disability-related course accommodations, disabled students must contact Student Accessibility Services (SAS) and complete the steps required for SAS to review accommodation requests. More information can be found on the UCF Student Accessibility Services website under the Start Here tab or by contacting SAS directly (Ferrell Commons 185; sas@ucf.edu; Phone - 407-823-2371).

Approved accommodations are shared with course instructors via the SAS Course Accessibility Letter. Implementing certain accommodations may require discussion about specific considerations of the course design, course learning objectives, and the individual academic and course challenges experienced by the student. While students with disabilities or chronic health needs are also encouraged to discuss any course concerns with professors in addition to contacting SAS, professors are not required to facilitate disability-related adjustments to the course unless the professor has received a Course Accessibility Letter from SAS that outlines approved accommodations.

Academic Integrity

Students should familiarize themselves with UCF's Code of Conduct at Student Conduct and Integrity Office. According to Section 1, "Academic Misconduct," students are prohibited from engaging in:

1. Academic misconduct is defined as any submitted work or behavior that obstructs the instructor of record's ability to accurately assess the student's understanding or completion of course materials or degree requirements (e.g., assignment, quiz,

and/or exam). Examples of academic misconduct include but are not limited to: plagiarism, unauthorized assistance to complete an academic exercise; unauthorized communication with others during an examination, course assessment, or project; falsifying or misrepresenting academic work; providing misleading information to create a personal advantage to complete course/degree requirements; or multiple submission(s) of academic work without permission of the instructor of record.

2. Any student who knowingly helps another violate academic behavior standards is also in violation of the standards.
3. Commercial Use of Academic Material. Selling of course material to another person and/or uploading course material to a third-party vendor without authorization or without the express permission of the University and the instructor of record. Course materials include but are not limited to class notes, the instructor of record's slide deck, tests, quizzes, labs, instruction sheets, homework, study guides, and handouts.
4. Soliciting assistance with academic coursework and/or degree requirements. The solicitation of assistance with an assignment, lab, quiz, test, paper, etc., without authorization of the instructor of record or designee is prohibited. This includes but is not limited to asking for answers to a quiz, trading answers, or offering to pay another to complete an assignment. It is considered Academic Misconduct to solicit assistance with academic coursework and/or degree requirements, even if the solicitation did not yield actual assistance (for example, if there was no response to the solicitation).

Responses to Academic Dishonesty, Plagiarism, or Cheating

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, *The Golden Rule*. UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and respond to academic misconduct when necessary. Penalties for violating rules, policies, and instructions within this course can range from a zero on the exercise to an "F" letter grade in the course. In addition, an Academic Misconduct report could be filed with the Office of Student Conduct and Academic Integrity, which could lead to disciplinary warning, disciplinary probation, or deferred

suspension or separation from the University through suspension, dismissal, or expulsion with the addition of a "Z" designated on one's transcript.

Being found in violation of academic conduct standards could result in a student having to disclose such behavior on a graduate school application, being removed from a leadership position within a student organization, the recipient of scholarships, participation in University activities such as study abroad, internships, etc.

Let's avoid all of this by demonstrating values of honesty, trust, and integrity. No grade is worth compromising your integrity and moving your moral compass. Stay true to doing the right thing: take the zero, not a shortcut.

Title IX

Title IX prohibits sex discrimination, including sexual misconduct, sexual violence, sexual harassment, and retaliation. If you or someone you know has been harassed or assaulted, you can find resources available to support the victim, including confidential resources and information concerning reporting options at Let's Be Clear and UCF Cares.

For more information on access and community engagement, Title IX, accessibility, or UCF's complaint processes contact:

- Title IX – ONAC – Office of Nondiscrimination & Accommodations Compliance & askanadvocate@ucf.edu
- Disability Accommodation – Student Accessibility Services – Student Accessibility Services & sas@ucf.edu
- Access and Community Engagement (including the Ginsberg Center for Inclusion and Community Engagement, Military and Veteran Student Success, and HSI Initiatives)
- UCF Compliance and Ethics Office – Compliance, Ethics, and Risk Office & complianceandethics@ucf.edu
- The Ombuds Office is a safe place to discuss concerns.

Reporting an Incident or Issue

If you believe you have experienced discrimination by any faculty or staff member, contact the Office of Nondiscrimination & Accommodations Compliance via the ONAC website or at 407-823-1336. You can also choose to report using the UCF Integrity Line either anonymously or as yourself at 1-855-877-6049 or by using the online form. UCF cares about you and takes every report seriously. For more information see the Reporting an Incident or Issue Webpage.

Deployed Active-Duty Military Students

Students who are deployed active-duty military and/or National Guard personnel and require accommodation should contact their instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make arrangements.

Campus Safety

At UCF's Public Safety and Police, safety is the top priority. Emergencies on campus are rare, but if one should arise, it's important to be familiar with some basic safety and security concepts.

- In an emergency, always dial 911.
- Every UCF Classroom has an Emergency Procedure Guide posted on a wall near the door, which will show you how to respond to a variety of situations. This guide can also be found online here.
- In the event of an active threat, remember **AVOID, DENY, DEFEND**. Choose the best course of action and act immediately. Watch the video here to learn more.
    - **AVOID**. Pay attention to your surroundings and have an exit plan. Get as much distance and as many barriers between you and the threat as quickly as possible.
    - **DENY**. When avoiding is difficult or impossible, deny the threat access to you and your space. Lockdown by creating barriers, turning the lights off and remaining quiet and out of sight. Make sure your phone is silenced, but do not turn it off.
    - **DEFEND**. When you are unable to put distance between yourself and the threat, be prepared to protect yourself. Commit to your actions, be aggressive

and do not fight fairly. Do whatever it takes to survive.

- For emergencies on campus, UCF will utilize the UCF Alert system. All UCF students, faculty, and staff are automatically enrolled to receive these email and text alerts, however, it's a good idea to frequently ensure your contact information is up to date.

Financial Aid Accountability

All instructors are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete this activity by the end of the first week of classes or as soon as possible after adding the course. Failure to do so may result in a delay in the disbursement of your financial aid.

Class Schedule

The course will have regular lectures on Monday and student driven discussions/presentations on Wednesday.

Week 1:

Readings:

How and where to search and how to read a peer-reviewed article. Check: http://www.raulpacheco.org/2017/06/writingpapers/

- Amaral, L. A., & Ottino, J. M. (2004). Complex networks.The European Physical Journal B-Condensed Matter and Complex Systems, 38(2), 147-162
- Baggio, J.A. (2017). Complex Adaptive Systems, Simulations and Agent-Based Modelling. In R. Baggio & J. Klobas (Eds.), Quantitative research methods in tourism: a handbook, 2nd Edition (pp. 363-396). Bristol: Channelview
- Baggio, J.A., Baggio, R. (2020). Chapter 1: Systems and Tourism Systems in Modelling and Simulations for Tourism and Hopsitatility. Bristol, Channelview. (forthcoming) ISBN: 9781845417413

- Glouberman, S., & Zimmerman, B. (2002). Complicated and Complex Systems: What Would Successful Reform of Medicare Look Like?Commission on the Future of Health Care in Canada (Vol. 8)

Monday Introduction to the course. What we will do, what is expected, what are the aims and objectives and the philosophy behind the teaching of this courseLinks to an external site.

Wednesday Complexity Theory: What is a system? What is the difference between simple, complicated and complex system? Examples of complex systems vs complicated systems. - Finalize group decisions

Friday Jan 16: Deadline to Document Academic Activity (Quiz)

Week 2:

Monday Jan 19: No class, MLK day.

Wednesday Jan 21 : Extra credit Experimental Session in HPH 310 or writing a one page summary on pros and cons of the use of games to promote sustainability (*no need to come to class if you choose this) – Finalize groups for discussions.

Week 3:

Readings:

- Dietz, T. (2003). Struggle to Govern the Commons. Science, 302(5652), 1907–1912
- Hardin, G. (1968). The Tragedy of the Commons. Science, 162(3859), 1243–1248.
- Ostrom, E. (1998). A behavioral approach to the rational choice theory of collective action: Presidential address, American Political Science Association, 1997. American political science review, 92(1), 1-22

- Baggio, J. A., Barnett, A. J., Perez-Ibara, I., Brady, U., Ratajczyk, E., Rollins, N., … Janssen, M. A. (2016). Explaining success and failure in the commons: The configural nature of Ostrom's institutional design principles. International Journal of the Commons, 10(2).

Monday Jan 26: Common pool resources and social dilemmas

Wednesday Jan 28 Group 1: Presentation/Discussion Lead on common pool resources and their relation to the global arena

Week 4:

Readings:

- Ostrom, E. (2006). The value-added of laboratory experiments for the study of institutions and common-pool resources. Journal of Economic Behavior & Organization, 61(2), 149-163
- Baggio, J. A., Rollins, N. D., Pérez, I., & Janssen, M. A. (2015). Irrigation experiments in the lab: Trust, environmental variability, and collective action. Ecology and Society, 20(4), 12.
- Janssen, M. A., Holahan, R., Lee, A., & Ostrom, E. (2010). Lab experiments for the study of social-ecological systems. Science,328(5978), 613–617.
- Janssen, M. A., Bousquet, F., Cardenas, J. C., Castillo, D., & Worrapimphong, K. (2012). Field experiments on irrigation dilemmas. Agricultural Systems, 109, 65-75.

Monday Feb 2 : Common pool resources in Action: behavioral experiments to assess collective action

Wednesday Feb 4 : Group 2: Presentation/Discussion Lead on behavior and implication on sustainability

Week 5:

Readings:

- Tainter, J. A. (2006). Archaeology of Overshoot and Collapse. Annual Review of Anthropology, 35(1), 59–74.
- Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., ... & Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. science, 347(6223), 1259855
- O'Neill, Daniel W., Andrew L. Fanning, William F. Lamb, and Julia K. Steinberger. "A good life for all within planetary boundaries." Nature sustainability 1, no. 2 (2018): 88-95.
- Kim, R. E., & Kotzé, L. J. (2021). Planetary boundaries at the intersection of Earth system law, science and governance: A state-of-the-art review. Review of European, Comparative & International Environmental Law, 30(1), 3-15.
- Milkoreit, M., Hodbod, J., Baggio, J., Benessaiah, K., Calderón-Contreras, R., Donges, J. F., ... & Werners, S. E. (2018). Defining tipping points for social-ecological systems scholarship—an interdisciplinary literature review. Environmental Research Letters, 13(3), 033005.

Monday Feb 9: Planetary Boundaries and implications on sustainable development goals

Wednesday Feb 11 Group 3: Presentation/Discussion Lead on how planetary boundaries should (or not) influence sustainability discourse

Week 6:

Readings:

- Allen, C. R., Angeler, D. G., Garmestani, A. S., Gunderson, L. H., & Holling, C. S. (2014). Panarchy: theory and application. Ecosystems, 17(4), 578-589.
- Epstein, G., Vogt, J. M., Mincey, S. K., Cox, M., & Fischer, B. (2013). Missing ecology: integrating ecological perspectives with the social-ecological system framework. International Journal of the Commons, 7(2), 432-453.
- Ostrom, E. (2009). A general framework for analyzing sustainability of social-ecological systems. Science, 325(5939), 419-422

- Ostrom, E. (2011). Background on the institutional analysis and development framework.Policy Studies Journal, 39(1), 7-27.

Monday Feb 16: Social-Ecological Systems

Wednesday Feb 18 Group 4: Implications of social-ecological systems lens on sustainability

Week 7:

Readings:

- Cumming, G., Cumming, D. H., & Redman, C. (2006). Scale mismatches in social-ecological systems: causes, consequences, and solutions. Ecology and society, 11(1).
- Cumming, G. S., Olsson, P., Chapin, F. S., & Holling, C. S. (2013). Resilience, experimentation, and scale mismatches in social-ecological landscapes. Landscape Ecology, 28(6), 1139-1150.
- Epstein, G., Pittman, J., Alexander, S. M., Berdej, S., Dyck, T., Kreitmair, U., ... & Armitage, D. (2015). Institutional fit and the sustainability of social–ecological systems. Current Opinion in Environmental Sustainability, 14, 34-40.
- Sayles, J. S., & Baggio, J. A. (2017). Social–ecological network analysis of scale mismatches in estuary watershed restoration. Proceedings of the National Academy of Sciences, 114(10), E1776-E1785.
- Sayles, J. S., & Baggio, J. A. (2017). Who collaborates and why: Assessment and diagnostic of governance network integration for salmon restoration in Puget Sound, USA. Journal of environmental management, 186, 64-78.

Monday Feb 23: Resilience and Scale Mismatches in time, space and scope

Wednesday Feb 25 Group 5: Resilience and Scale Mismatches - how to address them and when it is important to address them

Week 8:

Readings:

- Anderies, J. M. (2015). Managing variance: Key policy challenges for the Anthropocene. Proceedings of the National Academy of Sciences, 112(46), 14402–14403
- Baggio, J. A., Brown, K., & Hellebrandt, D. (2015). Boundary object or bridging concept? A citation network analysis of resilience. Ecology and Society, 20(2), 2.
- Biggs, R., Schlüter, M., Biggs, D., Bohensky, E. L., BurnSilver, S., Cundill, G., … West, P. C. (2012). Toward Principles for Enhancing the Resilience of Ecosystem Services. Annual Review of Environment and Resources, 37(1), 421–448. http://doi.org/10.1146/annurev-environ-051211-123836
- Carpenter, S., Walker, B., Anderies, J. M., & Abel, N. (2001). From Metaphor to Measurement: Resilience of What to What? Ecosystems,4(8), 765–781.
- Folke, C. 2006. Resilience: the emergence of a perspective for social-ecological systems analyses. Global Environmental Change 16: 253-267.
- Walker, B., Gunderson, L., Kinzig, A., Folke, C., Carpenter, S., & Schultz, L. (2006). A handful of heuristics and some propositions for understanding resilience in social-ecological systems. Ecology and society, 11(1).
- Walker, B., Holling, C. S., Carpenter, S., & Kinzig, A. (2004). Resilience, adaptability and transformability in social–ecological systems. Ecology and society, 9(2).

Monday Mar 2 : First Presentation – 12-13 Randomly chosen students

Wednesday Mar 4 : First Presentation – 12-13 Randomly chosen students

Friday Mar 6: Swapping groups for the second round of group presentations if you decide to do so.

Week 9:

Readings:

- Allen, C. R., Fontaine, J. J., Pope, K. L., & Garmestani, A. S. (2011). Adaptive management for a turbulent future. Journal of environmental management, 92(5), 1339-1345.
- Crona, B., & Parker, J. (2012). Learning in support of governance: theories, methods, and a framework to assess how bridging organizations contribute to adaptive resource governance. Ecology and Society, 17(1).
- DeCaro, D. A., Chaffin, B. C., Schlager, E., Garmestani, A. S., & Ruhl, J. B. (2018). Theory and research to study the legal and institutional foundations of adaptive governance. In Practical Panarchy for Adaptive Water Governance(pp. 269-288).
- Olsson, P., Gunderson, L., Carpenter, S., Ryan, P., Lebel, L., Folke, C., & Holling, C. S. (2006). Shooting the rapids: navigating transitions to adaptive governance of social-ecological systems. Ecology and society, 11(1).
- Plummer, R., & Armitage, D. (2010). Integrating perspectives on adaptive capacity and environmental governance. In Adaptive capacity and environmental governance(pp. 1-19). Springer, Berlin, Heidelberg

Monday Mar 9: Adaptive management (and presentations if not finished the week before)

Wednesday Mar 11: Group 1: Discuss and present on adaptive management in social-ecological systems and its relation to sustainability

Spring Break - Mar 16-21

Week 10:

Readings:

- Baird, J., Plummer, R., Schultz, L., Armitage, D., & Bodin, Ö. (2018). Integrating Conservation and Sustainable Development Through Adaptive Co-management in UNESCO Biosphere Reserves. Conservation and Society, 16(4), 409-419.

- Fabricius, C., Folke, C., Cundill, G., & Schultz, L. (2007). Powerless spectators, coping actors, and adaptive co-managers: a synthesis of the role of communities in ecosystem management. Ecology and Society, 12(1).
- Olsson, P., Folke, C., & Berkes, F. (2004). Adaptive comanagement for building resilience in social–ecological systems. Environmental management, 34(1), 75-90.
- Olsson, P., Folke, C., & Hahn, T. (2004). Social-ecological transformation for ecosystem management: the development of adaptive co-management of a wetland landscape in southern Sweden. Ecology and Society, 9(4).

Monday Mar 23: Co-Management in Social-Ecological Systems

Wednesday Mar 25: Group 2: Discuss and present on co-management for sustainability

Week 11:

Readings:

- Adger, W. N., & Barnett, J. (2009). Four reasons for concern about adaptation to climate change. Environment and Planning A, 41(12), 2800-2805.
- Bennett, E. M., Solan, M., Biggs, R., McPhearson, T., Norström, A. V., Olsson, P., ... & Carpenter, S. R. (2016). Bright spots: seeds of a good Anthropocene. Frontiers in Ecology and the Environment, 14(8), 441-448.
- Kates, R. W., Travis, W. R., & Wilbanks, T. J. (2012). Transformational adaptation when incremental adaptations to climate change are insufficient. Proceedings of the National Academy of Sciences, 109(19), 7156-7161.
- Moore, M. L., Tjornbo, O., Enfors, E., Knapp, C., Hodbod, J., Baggio, J. A., ... & Biggs, D. (2014). Studying the complexity of change: toward an analytical framework for understanding deliberate social-ecological transformations. Ecology and Society, 19(4)
- Pelling, M., O’Brien, K., & Matyas, D. (2015). Adaptation and transformation. Climatic Change, 133(1), 113-127.

- Pereira, L., Bennett, E., Biggs, R., Peterson, G., McPhearson, T., Norström, A., ... & Vervoort, J. (2018). Seeds of the future in the present: Exploring pathways for navigating towards “good” Anthropocenes.

Monday Mar 30: Adaptation and Transformation

Wednesday Apr 1: Group 3: Discuss and present on adaptation and transformation for sustainability

Week 12:

Readings:

- Hák, T., Janoušková, S., & Moldan, B. (2016). Sustainable Development Goals: A need for relevant indicators. Ecological indicators, 60, 565-573.
- Sachs, J. D., Schmidt-Traub, G., Mazzucato, M., Messner, D., Nakicenovic, N., & Rockström, J. (2019). Six transformations to achieve the sustainable development goals. Nature sustainability, 2(9), 805-814.
- Pradhan, P., Costa, L., Rybski, D., Lucht, W., & Kropp, J. P. (2017). A systematic study of sustainable development goal (SDG) interactions. Earth's Future, 5(11), 1169-1179.
- Singh, G. G., Cisneros-Montemayor, A. M., Swartz, W., Cheung, W., Guy, J. A., Kenny, T. A., ... & Ota, Y. (2018). A rapid assessment of co-benefits and trade-offs among Sustainable Development Goals. Marine Policy, 93, 223-231.

Monday Apr 6: Sustainable development goals

Wednesday Apr 8: Group 4: Discuss and present on trade-offs and synergy of the sustainable development goals

Week 13:

Readings:

- Baggio, J. A., Freeman, J., Coyle, T. R., & Anderies, J. M. (2022). Harnessing the benefits of diversity to address socio-environmental governance challenges. Plos one, 17(8), e0263399.
- Freeman, J., Baggio, J. A., & Coyle, T. R. (2020). Social and general intelligence improves collective action in a common pool resource system. Proceedings of the National Academy of Sciences, 117(14), 7712-7718.
- Baggio, J. A., Freeman, J., Coyle, T. R., Nguyen, T. T., Hancock, D., Elpers, K. E., ... & Pillow, D. (2019). The importance of cognitive diversity for sustaining the commons. Nature communications, 10(1), 1-11
- Aminpour, P., Schwermer, H., & Gray, S. (2021). Do social identity and cognitive diversity correlate in environmental stakeholders? A novel approach to measuring cognitive distance within and between groups. Plos one, 16(11), e0244907
- Cronin, M. A., & Weingart, L. R. (2019). Conflict across representational gaps: Threats to and opportunities for improved communication. Proceedings of the National Academy of Sciences, 116(16), 7642-7649.

Monday Apr 13: Diversity, collective action, common pool resources and sustainability

Wednesday Apr 15: Group 5 : Discuss and present on trade-offs and synergy of the sustainable development goals

Week 14:

Monday Apr 20: Second Presentation – 12-13 randomly chosen students

Wednesday Apr 23: Second Presentation – 12-13 randomly chosen students

Week 15:

Monday Apr 27 : If needed Second Presentation – remaining students (class end on this day)

Friday May 1st: Final Essay Due