

CSUS 891 - 002
Social-Ecological Resilience

Fall 2018
Thursdays, 5.00-7.50pm
Room 320 A&B

Instructor Information

Instructor: Dr. Jennifer Hodbod

Office: Natural Resources Building, Room 310 B

Office hours: By appointment, arranged by email.

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Course Description

Short description: Students in this seminar will explore the debates in the contemporary literature on adaptation, resilience and transformation, analyze how these concepts have been operationalized and applied in empirical cases, and evaluate their limitations in light of the challenge of systemic transformation.

Credits: Total Credits: 3

Full description: The challenge of climate change combined with an increasing demand for more sustainable development pathways has brought the concept of social-ecological resilience to the fore in research and practice, building on the adaptation literature and influencing the transformation literature. This course will explore how these three concepts are related and how each contributes to the pursuit of sustainability, including addressing their limitations. Each one of these concepts brings about a different analytical and action perspective to understand, assess, and promote positive social change in the face of accelerating global environmental changes. Students in this seminar will explore the debates in the contemporary literature on adaptation, resilience and transformation, analyze how these concepts have been operationalized and applied in empirical cases, and evaluate their limitations in light of the challenge of systemic transformation. The course will particularly stress the importance of understanding of social change as part of the relationship between nature and society and as such, attention will be paid to issues of power, equity, competing visions of desired states, and conflict in the realization of adaptation and transformation and the pursuit of resilience. Additionally, this course will provide an opportunity for students to utilize systems thinking in approaching sustainability research. As a group, we will apply these concepts to a case study, and individually you will assess the applicability of these concepts to your own research and practice in sustainability.

Prerequisites

No prerequisites

Recommended background: natural resources, food systems, environmental science, policy, social science

Course restrictions: graduate students only

Course Outcomes

Students will leave this class with the capacity to appropriately deploy theories, concepts and approaches to understanding adaptation, resilience and transformation in specific research contexts. By providing a unique and a systematic evaluation of adaptation, transformation, and resilience as theoretical lenses and operational concepts, this course will equip students in tools for addressing global environmental change and uncertainty. These aims will guide the pursuit of the course objectives, which are to:

- Introduce selected definitions and theoretical traditions in adaptation, resilience and transformation research.
- Understand and evaluate critiques of these traditions in sustainability science.
- Build capacity to apply adaptation, resilience and transformation concepts to sustainability research and practice.
- Explore the application of these concepts.

The goal of the final project is to give you the opportunity to explore your own approach to social-ecological analysis. Students with well-defined research questions and projects might situate and elaborate on the underpinnings of their approach. Students still developing research projects might explore what approaches seem attractive given their interests, disciplinary affinities, and trade-offs among approaches.

Learning Objectives

To achieve the course goal students will fulfill the following learning objectives:

1. Define three concepts associated with social-ecological change - adaptation, resilience, and transformation.
2. Describe the evolution of theory behind these concepts.
3. Compare the ways adaptation, resilience, and transformation have been interpreted and operationalized by different user-groups (academia, governments, non-government organizations, practitioners).
4. Compare and contrast how these different concepts integrate ideas of systems dynamics, trade-offs, cascading effects and unintended consequences, scale, and transdisciplinarity.
5. Apply the adaptive cycle to real world examples.
6. Describe the major critiques of 'systems' perspectives, including difficulties associated with bounding the system, and 'compartmentalized' and fragmented understandings of complex interrelated processes.
7. Demonstrate how an analysis of a social-ecological system can lead to sustainability targets for policy and management.
8. Evaluate frameworks and tools that describe, analyze and intervene in social-ecological systems.
9. Analyze likely obstacles and opportunities typically encountered in transitions and transformations towards sustainability.
10. Apply relevant theories of change to diverse, contemporary social-ecological issues (i.e. persistent social inequity, climatic change, increasing resource scarcity, ecosystem degradation, and systemic risk) to demonstrate their societal relevance.
11. Synthesize both existing work and individual thought into a coherent, logically structured final project.

Required and Recommended Resources

This seminar will be a reading- and discussion-intensive course - you will read 4-6 articles (or equivalent in book chapters or other media) per week. There are two required books:

- Biggs, R., Schlüter, M., & Schoon, M. L. (Eds.). (2015). *Principles for building resilience: sustaining ecosystem services in social-ecological systems*. Cambridge University Press.
- Brown, K. (2015). *Resilience, Development and Global Change*. Routledge.

All other primary readings will be placed on D2L in a folder for each week. There will be an additional folder for readings that are not required but may be of interest.

Teaching Philosophy

My teaching philosophy is to train students to become change-makers by instilling in them the importance of systems thinking. As an interdisciplinary researcher, I utilize knowledge and methods from multiple disciplines, and similarly when teaching I frame classes around the interconnected nature of coupled human-nature interactions. I believe that by preparing students to address social-ecological issues through a complex systems perspective they will begin to break out of linear thinking patterns, a critically important skill that can be applied in any career.

Methods of Instruction

To teach students how to develop such perspectives, I use both research-led and research-based teaching, framing topics in case studies from the cutting edge of the field and providing opportunities to experience enquiry-based learning.

Assignments

Graded Course Activities

There are three assessment activities that will be graded in this class. The assignments are iterative – the reading summaries will inform the discussions, which in turn will inform your essays, which in turn will inform your resilience assessment methodology, concluding in your briefing note. Your final reflection presentation should integrate what you've learnt from all the prior assignments.

Assignment #1: Participation and Leadership

The intention of this class is that you are given space to form your own opinions about these concepts and their utility to your research. As such, this class will be a team effort. The format will be a mix of discussions, reading, in-class exercises, and some lectures. This class will place a lot of emphasis in-class participation. To participate effectively in class activities and discussions, you need to read and reflect on the assigned papers before each class, as each week, the first hour of the class will be a facilitated discussion, led by class members who will rotate in leading the discussion. Each week, I will allocate two-four readings that will be more theoretical, and ***the discussion leader should choose two additional papers with an empirical element*** to provide context about methods applied within that week's concept.

- a) Discussion Leaders:
 - a. Select two additional papers and send PDFs to JH by the class one week before your week. JH will upload to D2L during class.
 - b. Submit notes on readings to D2L before class (1 point). As the discussion leader the notes should include points for discussion and highlight linkages between papers to aid discussion.
 - c. Define a strategy for 1-hour discussion. Think of innovative ways to involve your colleagues in the conversation – Organize a debate? Construct a “fishbowl”? Make a collective concept map?
 - d. Be prepared to initiate discussion:
 - i. Summarize (5 -7 min) key messages and points in readings
 - ii. Pull out 2-3 debatable, problematic, or controversial issues for discussion, linking together the readings.
 - iii. Employ your chosen strategy with the class.
- b) Class members:
 - a. Read and take notes on the readings.
 - b. Submit notes to D2L before class. They'll be graded pass/fail, 1 point each.

- c. Be prepared to engage actively in discussion during class.

In-class participation will be evaluated in the following way: 1) clear, insightful comments made in class regarding the readings and ideas contained within; 2) demonstrated ability to follow up on comments made by peers and relate them to the material we're covering in class (rather than irrelevant digressions); 3) demonstrated capacity for concise and digestible summaries of material read.

Whilst I will not be taking attendance I cannot assess your participation if you are not present. If you know you need to absent please contact me in advance of class.

Assignment #2: Applicability of resilience theory to your own research

You will prepare 3 short essays (~1000 -1500 words) on each of the three core concepts in the course (adaptation, resilience, transformation) **as these concepts relate to your own research and / or interests in sustainability**. The details of each assignment will be provided to you on D2L. Please use APA style citations and include title and list of references. Your final will be a presentation, integrating these three essays to discuss on how you feel the course material relates to your own research project (10 minutes).

Assignment #3: Resilience Assessment

Throughout the class, we will work together to create a research design and methodology for a resilience assessment, discussing each week how to assess the elements of theory we've been reading about. We will be creating a resilience assessment protocol for the Tanzania Partnership Program <https://casid.isp.msu.edu/tanzania-partnership-program/> who are in need of an evaluation plan and would like to investigate the impact their program has had on the resilience of the two communities they have been working in. Whilst preparing the research design and methodology, we will look at other examples from a current project of mine in Ethiopia, and will examine the following intermediate products in class: system variable table; resource map; stakeholder map; timeline; conceptual model (adaptive cycle); mental models; systems diagram. The final output of the case study will be the research design and methodology, and a briefing note for the TPP manager explaining how and why to utilize it.

Late Work Policy

No late assignments will be accepted.

Assignment Logistics

All assigned papers must be typed, double-spaced, one-inch margins, 12-point font, and pages numbered (Times New Roman or Arial font). For questions regarding writing style, and reference citations, refer to the American Psychological Association (APA) manual and recent editions. All assignments are due on the class date defined below. All assignments will be submitted to a dropbox folder via D2L, by 11.30pm on the deadline (other than the reading summaries which are due before class i.e. 5pm). A grading criteria sheet (rubric) will be available on D2L for each assignment and will be used for the assessment of the assignment.

#	Assignment	Points	Due
1	Participation in discussion	9	Every class
	Reading summaries	11	Every class
	Leadership	5	When leading discussion
2	Essay #1	10	20 th September
	Essay #2	10	8 th November
	Essay #3	10	6 th December

	Presentation	15	6 th December
3	Research design	10	5 th October
	Methodology	10	29 th November
	Briefing note	10	13 th December
	TOTAL	100	

Letter Grade Assignment

Grade	Points
4.0	94-100
3.5	88-93
3.0	81-87
2.5	75-80
2.0	70-74
1.5	65-69
1.0	61-64
0	<60

Course Schedule

The following schedule is tentative and subject to change:

Week	Date	Concept	Topic	Readings
1	08/30	Introduction - Adaptation	Adaptation, Resilience, Transformation	Nelson et al. 2007
			Intro to the Tanzania Partnership Project and the assignment	https://pscd.isp.msu.edu/
2	09/06	Adaptation	Adaptive capacity	Engle et al. 2011; Eakin et al. 2014; Lemos et al. 2016
			Tanzania Partnership Project – John Bonnell	
3	09/13	Resilience	Social-ecological systems and resilience	Folke et al. 2010; Biggs et al. 2015 (Ch 1, 2); Adger 2000
			Bounding the TPP system – John Kaneene	
4	09/20	Resilience	Conceptual models of change	Berkes et al. 2003; Beymer-Farris et al. 2012; Allen et al. 2014
			Change in the TPP communities	
5	09/27	Resilience	Operationalizing Resilience	Carpenter et al. 2001; Resilience Alliance 2011; Brown 2016 (Ch 4); Allen et al. 2018
			Resilience assessment research design	
6	10/04	Resilience	Resilience across disciplines	Olsson et al. 2015; Brown 2016 (Ch 1, 2, 3)
			Resilience assessment research design	
7	10/11	AUTUMN BREAK		

8	10/18	Resilience	Principles of resilience: Diversity and redundancy	Biggs et al. 2015 (Ch 3); Hodbod and Eakin 2015; Hodbod et al. 2016
			Resource and stakeholder mapping	
9	10/25	Resilience	Principles of resilience: Connectivity, fast and slow variables, and feedbacks	Biggs et al. 2015 (Ch 4, 5, 6); Walker et al. 2006
			Cascading impacts	
10	11/01	Resilience	Principles of resilience: Learning and participation	Biggs et al. 2015 (Ch 7, 8); Fazey 2010
			Assessing learning	
11	11/08	Transformation	Traps and transformation theory	Allison and Hobbs 2004; O'Brien 2012; Olsson et al. 2014; Brown 2016 (Ch 5 and 6); Haider et al. 2017
			Identification of traps	
12	11/15	Transformation	Innovation and transformative capacity	Westley et al. 2011; Olsson and Galaz 2012; Moore et al. 2015; Moore et al. 2018
13	11/22	THANKSGIVING		
14	11/29	Transformation	Power, agency, and transformation	Avelino and Rotmans 2009; Smith and Stirling 2010; Westley et al. 2013; Manuel-Navarette and Pelling 2015
15	12/06	Presentations	Reflections	
Finals week	12/13	No meeting		

Course Policies

Attendance:

Students whose names do not appear on the official class list for this course may not attend this class. Students who fail to attend the first four class sessions or class by the fifth day of the semester, whichever occurs first, may be dropped from the course.

This course follows the General University Attendance Policy. If you miss a class due to a Special Consideration Absence as defined by University Policy, your class participation grade for those excused absence days will be the average of your earned participation grade.

E-Learning Policies:

Information technologies such as D2L and email are widely used in this class. As a result, there are some additional policies that need to be understood.

- Students should visit the course’s D2L site on a regular basis.
- Students should check their email frequently (all class email is sent to the student’s official MSU email account).
- All assignments submitted electronically, either on disk or via email, should be free of any viruses and/or worms. Any infected file or disk that is submitted will receive a zero (0) for that assignment.
- This course recognizes the students’ right to privacy and adheres to the Family Educational Rights and Privacy Act (FERPA).
- Students need to review the university policy “Acceptable Use of Computing Systems, Software, and the University Digital Network” at <http://lct.msu.edu/guidelines-policies/aup/>.
- The Web site tech.msu.edu provides a number of information technology resources for students.
- You are responsible for the operation of any personally owned computers you use on or off campus. A malfunctioning computer system is NOT a valid excuse for submitting late work.
- Students are expected to have a high degree of self-motivation and self-direction in this class and develop the needed technology skills to excel in this class and in life.
- CSUS 891 Turnitin Policy
 - Consistent with MSU’s efforts to enhance student learning, foster honesty, and maintain integrity in our academic processes, instructors may use a tool called Turnitin to compare a student’s work with multiple sources. The tool compares each student’s work with an extensive database of prior publications and papers, providing links to possible matches and a ‘similarity score’. The tool does not determine whether plagiarism has occurred or not. Instead, the instructor must make a complete assessment and judge the originality of the student’s work. All submissions to this course may be checked using this tool.
 - Students should submit papers to Turnitin Dropboxes without identifying information included in the paper (e.g. name or student number – i.e. using the title protocol outlined above). The system will automatically show this info to faculty in your course when viewing the submission, but the information will not be retained by Turnitin.

Excessive emails make an unreasonable time demands on both sender and recipient. Please ensure you have a legitimate need before you write. Dr. Hodbod will answer email about:

- Questions arising from difficulty in understanding course content.
- Requests for feedback about graded assignments.
- Private issues appropriate for discussion within the teacher-student relationship.

Dr. Hodbod will NOT answer email which:

- Poses questions answered in the course information sections of the course D2L site.
- Poses questions answered in the course syllabus.
- Lacks a subject line clearly stating the purpose of the email and the course number (CSUS 891-002).
- Raises an inappropriate subject.

Dr. Hodbod will answer email received on a given day no later than close of work on the next workday.

Academic Honesty:

[Article 2.III.B.2](#) of the Academic Freedom Report states: “The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards.” In addition, the Department of Sustainability adheres to the policies on academic honesty specified in General Student Regulation 1.0, [Protection of Scholarship and Grades](#); the all-University Policy on [Integrity of Scholarship and Grades](#); and [Ordinance 17.00](#), Examinations. (See Spartan Life: Student Handbook and Resource Guide and/or the MSU Web site: www.msu.edu).

Therefore, unless authorized by your instructor, you are expected to complete all course assignments, including homework, lab work, quizzes, tests and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Also, you are not authorized to use the www.allmsu.com Web site to complete any course work in this course. Students who violate MSU regulations on Protection of Scholarship and Grades will receive a failing grade in the course or on the assignment.

Faculty are required to report all instances in which a penalty grade is given for academic dishonesty. Students reported for academic dishonesty are required to take an online course about the integrity of scholarship and grades. A hold will be placed on the student's account until such time as the student completes the course. This course is overseen by the Associate Provost for Undergraduate Education.

(See also <https://www.msu.edu/~ombud/academic-integrity/index.html>). **There will be no warnings – the maximum sanction allowed under University policy will occur on the first offense.**

Bereavement:

Students seeking a grief absence should be directed to the Grief Absence Request Form found on the RO home page (<https://reg.msu.edu/>) under 'Student Services – Grief Absence Request Form' OR to StuInfo (<https://stuinfo.msu.edu/>) under 'Academics - Enrollment Information and Services – Grief Absence Request Form.' Per policy, graduate students who should see their major professor and notify course instructors are directed to do so when they access the form.

Disruptive Behavior:

Article 2.III.B.4 of the [Student Rights and Responsibilities \(SRR\)](#) for students at Michigan State University states: "The student's behavior in the classroom shall be conducive to the teaching and learning process for all concerned." Article 2.III.B.10 of the [SRR](#) states that "The student and the faculty share the responsibility for maintaining professional relationships based on mutual trust and civility." [General Student Regulation 5.02](#) states: "No student shall . . . interfere with the functions and services of the University (for example, but not limited to, classes . . .) such that the function or service is obstructed or disrupted. Students whose conduct adversely affects the learning environment in this classroom may be subject to disciplinary action through the Student Judicial Affairs office.

Social Media

As members of a learning community, students are expected to respect the intellectual property of course instructors. All course materials presented to students are the copyrighted property of the course instructor and are subject to the following conditions of use:

1. Students may record lectures or any other classroom activities and use the recordings **only** for their own course-related purposes.
2. Students may share the recordings with other students enrolled in the class. Sharing is limited to using the recordings **only** for their own course-related purposes.
3. Students **may not** post the recordings or other course materials online or distribute them to anyone not enrolled in the class without the advance written permission of the course instructor and, if applicable, any students whose voice or image is included in the recordings.

Any student violating the conditions described above may face academic disciplinary sanctions.

Commercialized Lecture Notes:

Commercialization of lecture notes and university-provided course materials is not permitted in this course.

Complete Assignments

All assignments for this course will be submitted electronically through D2L. Assignments must be submitted by the given deadline or special permission must be requested from instructor **before** the due date. Extensions will not be given beyond the next assignment except under extreme circumstances.

Understand When You May Drop This Course

It is the student's responsibility to understand when they need to consider un-enrolling from a course. Refer to the [Michigan State University Office of the Registrar](#) for important dates and deadlines.

Drops and Adds

The last day to add this course is the end of the first week of classes. The last day to drop this course with a 100 percent refund and no grade reported is 9/24/2018. The last day to drop this course with no refund and no grade reported is 10/17/2018. You should immediately make a copy of your amended schedule to verify you have added or dropped this course.

Inform Your Instructor of Any Accommodations Needed

Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. If you have a documented disability and verification from the [Resource Center for Persons with Disabilities](#) (RCPD), and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of disability to RCPD and meet with an RCPD specialist to request special accommodation before classes start. Once your eligibility for an accommodation has been determined, you will be issued a verified individual services accommodation ("VISA") form. Please present this form to the instructor at the start of the term and/or two weeks prior to the accommodation date (test, project, etc). Requests received after this date will be honored whenever possible. RCPD is located in 120 Bessey Hall, near the center of the Michigan State University campus, on the southwest corner of Farm Lane and Auditorium Road. RCPD may be contacted by phone at (517) 884-7273 (884-RCPD), or [via their website](http://www.rcpd.msu.edu) (<http://www.rcpd.msu.edu>).

Commit to Integrity

Academic Honesty

Article 2.3.3 of the [Academic Freedom Report](#) states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the (insert name of unit offering course) adheres to the policies on academic honesty as specified in General Student Regulations 1.0, Protection of Scholarship and Grades; the all-University Policy on Integrity of Scholarship and Grades; and Ordinance 17.00, Examinations. (See [Spartan Life: Student Handbook and Resource Guide](#) and/or the [MSU Web site: www.msu.edu](#).)

Therefore, unless authorized by your instructor, you are expected to complete all course assignments, including homework, lab work, quizzes, tests and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Also, you are not authorized to use the www.allmsu.com Web site to complete any course work in this course. Students who violate MSU academic integrity rules may

receive a penalty grade, including a failing grade on the assignment or in the course. Contact your instructor if you are unsure about the appropriateness of your course work. (See also <http://www.msu.edu/unit/ombud/dishonestyFAQ.html>)

Handling Emergency Situations

In the event of an emergency arising within the classroom, the Professor will notify you of what actions that may be required to ensure your safety. It is the responsibility of each student to understand the evacuation, “shelter-in-place,” and “secure-in-place” guidelines posted in each facility and to act in a safe manner. You are allowed to maintain cellular devices in a silent mode during this course, in order to receive emergency SMS text, phone or email messages distributed by the university. When anyone receives such a notification or observes an emergency situation, they should immediately bring it to the attention of the Professor in a way that causes the least disruption. If an evacuation is ordered, please ensure that you do it in a safe manner and facilitate those around you that may not otherwise be able to safely leave. When these orders are given, you do have the right as a member of this community to follow that order. Also, if a shelter-in-place or secure-inplace is ordered, please seek areas of refuge that are safe depending on the emergency encountered and provide assistance if it is advisable to do so.

Mandatory Reporting

Michigan State University is committed to fostering a culture of caring and respect that is free of relationship violence and sexual misconduct, and to ensuring that all affected individuals have access to services. For information on reporting options, confidential advocacy and support resources, university policies and procedures, or how to make a difference on campus, visit the Title IX website at titleix.msu.edu.

Limits to confidentiality. Essays, journals, and other materials submitted for this class are generally considered confidential pursuant to the University's student record policies. However, students should be aware that University employees, including instructors, may not be able to maintain confidentiality when it conflicts with their responsibility to report certain issues to protect the health and safety of MSU community members and others. As the instructor, I must report the following information to other University offices (including the Department of Police and Public Safety) if you share it with me:

- Suspected child abuse/neglect, even if this maltreatment happened when you were a child;
- Allegations of sexual assault, relationship violence, stalking, or sexual harassment; and
- Credible threats of harm to oneself or to others.

These reports may trigger contact from a campus official who will want to talk with you about the incident that you have shared. In almost all cases, it will be your decision whether you wish to speak with that individual. If you would like to talk about these events in a more confidential setting, you are encouraged to make an appointment with the MSU Counseling and Psychiatric Services.

Syllabus Disclaimer

All syllabi are subject to minor changes to meet the needs of the instructor, school, or class. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. The instructor reserves the right to make changes to the syllabus as deemed necessary. Students will be notified in a timely manner of any syllabus changes through the course site announcements. Please remember to check your MSU email and the course site announcements often.