WILDLIFE & SOCIETY
EAS 501.007
Graduate-level 3 credit course
Fall 2021

University of Michigan, Ann Arbor
Instructor: Dr. Neil Carter
Office Location: Dana Building 3505 or Zoom
Office Phone: 734-763-3764
Office Hour: 1:00-3:00pm Wednesdays.
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Class Time and Place: 2:30pm-4:00pm Tuesdays/Thursdays, Dana Bldg Rm 1024
Readings: No textbook – all readings are articles accessible through the library or Canvas

Course background and description

Increasing evidence indicates we face the sixth mass extinction of flora and fauna species – an extinction largely the result of human activities. The disappearance of wildlife and their habitats diminishes humans' quality of life. The well-being of humans and wildlife is therefore inextricable linked, necessitating the integration of social and natural sciences to understand human-wildlife interactions and promote coexistence. The coupled natural-human (or social-ecological) systems framework provides an interdisciplinary approach to examining interactions and feedbacks between humans (e.g., culture, socioeconomics, governance) and nature (e.g., wildlife, plants, abiotic features). The framework brings together researchers and managers from different backgrounds, including wildlife ecologists, anthropologists, demographers, geographers, sociologists, foresters, and landscape planners to tackle complex challenges.

This course will largely utilize the social-ecological systems framework to understanding human-wildlife interactions and contemporary wildlife conservation issues from local to global scales. Topics include measuring and evaluating tradeoffs in ecosystem services and disservices of wildlife; balancing multiple expectations and priorities among diverse stakeholder groups; ethical implications of species management, rewilding and de-extinction; institutional fit and adaptive management. A main goal is to help students engage in creative problem solving in a way that crosscuts and transcends traditionally isolated disciplines. The course will train graduate students to take an interdisciplinary approach to analyze critically wildlife conservation issues occurring around the globe.

The course content is divided into three main sections:
1. Exploring the overarching theories governing social-ecological systems research. We will use real-world case studies to connect theory to on-the-ground applications.
2. Examining cutting-edge mixed methods that can be harnessed for interdisciplinary research on wildlife conservation.
3. Utilizing a storytelling approach for answering a question about the future that embeds scientific information.

Learning objectives

By the end of the course, you should be able to:
- Explain mechanisms shaping variation in human-wildlife interactions and feedbacks that occur in diverse social-ecological contexts around the globe.
- Interpret a given wildlife conservation challenge from multiple perspectives, drawing on both natural and social science disciplines.
- Identify hidden human actors who are often ignored in single-discipline wildlife conservation efforts.
- Describe cutting-edge methods that may be used to address a given wildlife research question in an interdisciplinary manner.
- Construct compelling stories about the future that help us understand how technological, societal, and environmental changes will redefine how we share landscapes with wildlife.

Course components

Class Participation (70% of overall grade)

This course relies heavily on active student participation. The instructor expects students to come to class having read the assigned readings and be prepared to discuss them. Please notify the instructor of any absence. Participation will be assessed in three ways: 1) reflections on readings (5*0%*), 2) attendance in class (*10%*), and 3) leading a discussion (*10%*).

Reflections on readings: Students will use the Perusall module in Canvas for reflecting on readings each week. Perusall is a social learning platform for reading and annotating. It enables readers to interactively highlight text, pose and answer questions with classmates and instructors about the text, and receive AI-assisted grades on how well they engage the text. Each week's readings will be an "assignment" in Perusall with the due date the time and date of the class period for which the readings were assigned. For example, if the paper *Carter et al. 2014* was assigned for the class period on September 8, then the student should reflect on the reading (i.e., post comments on the text) in Perusall before that class period begins at 2:30pm.

Leading a discussion: Each student will lead a discussion in a breakout group for one class session. The discussion leader assignment comprises two parts. The first is to write a 1-page memo on the readings for the class session. The memo will: 1) provide some initial answers to the questions about the readings provided by the instructor; 2) raise any questions or areas that were unclear; and 3) provide "entry" points for a facilitated discussion in class. The memos will be due by 1:00pm the day of the class that they lead discussion. For example, if you were to lead discussion on September 8, you would submit the memo to the instructor via email by 1:00pm on September 8. The second part is to lead the discussion in your breakout group. The facilitated discussion should introduce the topic, provide initial answers to key questions that the instructor raised for the day's readings, and bring forward any other issues. Grading for discussion leaders will be in three tiers. 100%, 90%, or 75% depending on thoroughness, timeliness, and effort.

Final Project (30% of overall grade)

Each student will create a Radical Future, i.e., a story-based scenario, about sharing landscapes with wildlife in the future. The primary purpose of this project is for the student to use what they have learned in the course to design a vision of the future, and articulate the science of how they have constructed such a future, as well as reflect on how this design changes the way the student

thinks about the future. There will be three separate written components that will comprise the Final Project: 1) a Radical Future taking the form of a short story (*20%*); 2) scientific supplement (including references) explaining why the Radical Future makes sense (*5%*); and 3) an open-ended reflection on what the student has learned through developing the Radical Future (*5%*).

Grades and due dates

Your grade will be based on the following components:

Component	Percent of total	Due date
Class Participation	**70%**	
Reflections on readings	50%	Reflections due via Perusall in Canvas by the beginning of each class period
Attendance	10%	Every class period
Leading a discussion during class session	10%	Memo due via email by 1:00pm on day of class being led
Final Project	**30%**	
Radical Future short story	20%	December 10
Scientific supplement (including references)	5%	December 10
Open-ended reflection	5%	December 10

Grades will be calculated as follows:

A (93% or greater), A- (90%-92.99%), B+ (87%-89.99%), B (83%-86.99%), B- (80%-82.99%), C+ (77%-79.99%), C (73%-76.99%), C- (70%-72.99%), D+ (67%-69.99%), D (63%-66.99%), D- (60%-62.99%), E (<60%)

Course policies

Attendance: Regular attendance is expected of students. Students who are unavoidably absent because of illness or disability should report to the instructor as soon as they are able.

Accommodations for students with disabilities: Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately

Academic Honesty: Students are expected to be honest and ethical in their academic work. For more information about academic integrity and the University's policies and procedures in this area please refer to the Student Conduct web site.

Course Lectures: Students are prohibited from recording/distributing any Class Activity without written permission from the instructor, except as necessary as part of approved accommodations for students with disabilities. Any approved recordings may only be used for the student's own private use.

Safety: For the safety of all students, faculty, and staff on campus, it is important for each of us to be mindful of safety measures that have been required for our protection. By returning to campus, you have acknowledged your responsibility for protecting the collective health of our community. Your participation in this course on an in-person basis is conditional upon your adherence to all safety measures mandated by the State of Michigan and the University, including maintaining physical distancing of six feet from others, and properly wearing a face covering in class. Other applicable safety measures may be described in the Wolverine Culture of Care, the University's Face Covering Policy for COVID-19 and SEAS Questions & Concerns document. Your ability to participate in this course in-person as well as your grade may be impacted by failure to comply with campus safety measures. Individuals seeking to request an accommodation related to the face covering requirement under the Americans with Disabilities Act should contact the Office for Institutional Equity. If you are unable or unwilling to adhere to these safety measures while in a face-to-face class setting, you will be required to participate on a remote basis (if available) or to disenroll from the class. I also encourage you to review the Statement of Students Rights and Responsibilities and check-in with the Office of Academic Affairs Director to navigate support and resources for you.

Course Schedule

Week	Topics	Readings
31-Aug	Introductions	Liu et al. 2007; Carter et al. 2014
2-Sep	Applications: trophy hunting	Dickman et al. 2019; Trophy hunting response letters
7-Sep	Theory: social-ecological systems	Berkes et al. 2003; Walker et al. 2004
9-Sep	Applications: wildlife trade	Thach et al. 2018; Thomas-Walters et al. 2020
14-Sep	Theory: thresholds and feedbacks	Meyfroidt 2013; Bennett & McGinnis 2008;
16-Sep	Applications: wildlife and poverty	Golden et al. 2011; Barrett et al. 2011
21-Sep	Theory: social-ecological traps	Baker et al. 2018; Cole et al. 2018
23-Sep	Applications: wildlife and war	Gaynor et al. 2016; Daskin & Pringle 2018
28-Sep	Theory: biocultural approaches	Gavin et al. 2015; Sterling et al. 2017
30-Sep	Applications: biophilia and green spaces	Fuller et al. 2007; Goddard et al. 2013
5-Oct	Methods: conceptual approaches	Ostrom et al. 2009; Ceausu et al. 2019;
7-Oct	Applications: conflict and coexistence	Carter et al. 2016; Redpath et al. 2013
12-Oct	Methods: participatory methods	Guerbois et al. 2012; Perrotton et al. 2017
14-Oct	Applications: species invasions	Lotz & Allen 2013; Pfeiffer & Voeks 2008
19-Oct	**Fall study break (no class)**	
21-Oct	Methods: environmental histories	Parlee et al. 2012; Münster 2016
26-Oct	Applications: rewilding and de-extinction	Nogues-Bravo et al. 2016; Seddon et al. 2014
28-Oct	Methods: agent based modeling	Carter et al. 2020; An et al. 2005
2-Nov	Applications: wildlife and disease	De Sadeleer & Godfroid 2020
4-Nov	Methods: mapping	Dressel et al. 2018; Behr et al. 2017
9-Nov	Applications: land-sparing vs land-sharing	Majgaonkar et al. 2019; Grass et al. 2019
11-Nov	Imagining future: introduction	Wilson 2016; Merrie et al. 2018;
16-Nov	Imagining future: guest lecture	Wilson 2016;
18-Nov	Imagining future: worldbuilding	Wilson 2016; Pereira et al. 2018;
23-Nov	Imagining future: half-earth	Büscher et al. 2017
25-Nov	**Thanksgiving (no class)**	
30-Nov	Imagining future: character/plot	TBD
2-Dec	Imagining future: group activity	TBD
7-Dec	Wrap up	
13-Dec	Final Project due!	

This schedule is tentative and subject to change.

References (listed in order of assignments)

Liu, J., T. Dietz, S. R. Carpenter, C. Folke, M. Alberti, C. L. Redman, S. H. Schneider, E. Ostrom, A. N. Pell, and J. Lubchenco. 2007. Coupled human and natural systems. *AMBIO: a journal of the human environment* 36(8)**:**639-649.

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Thomas-Walters, L., Veríssimo, D., Gadsby, E., Roberts, D. and Smith, R.J., 2020. Taking a more nuanced look at behavior change for demand reduction in the illegal wildlife trade. *Conservation Science and Practice* p.e248.

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