

# Introduction to Environmental Social Science

EVPP 608

3 credits

Spring Semester, 2023

**INSTRUCTOR:** J. Michelle Ryan, PhD  
Email: jryan10@gmu.edu

**CLASSROOM:** Innovation Hall, Room 330

**CLASS MEETINGS:** Mondays, 7:20 PM to 10:00 PM

**OFFICE HOURS:** By appointment

## **COURSE DESCRIPTION:**

This course aims to provide insight into some of the most relevant social sciences and social scientific perspectives for studying environmental issues. The environmental social sciences (ESS) explore how humans interact with their surroundings and the contexts for their behaviors that have impacts across local, regional, and global scales. Because of the increasingly dire effects of human activities on the state of the Earth's ecological resources, the social science disciplines have a critical role to play in improving our understanding of these socio-environmental systems and promoting sustainable solutions.

The following is a list of sample research questions addressed by environmental social sciences:

1. To what extent does technological *change crowd out behavioral change* and what balance between technological and behavioral change is appropriate under different circumstances? For example, do recycling efforts lead us to reduce and reuse (the other of the three R's) less?
2. What factors about the current generation in the United States explain why it is *apathetic* with respect to particular environmental issues?
3. Can a small-scale biodiesel company that sources its oil primarily from street-food vendors make a profit in a New Delhi neighborhood? If so, what factors would affect the *financial viability* of this company?
4. What are the different *environmental and economic impacts* of shade-grown vs. sun-grown coffee plantations in Guatemala?
5. How *effective* will a payment for ecosystem services (PES) scheme be in the community of Boca Paríamanu in Madre de Dios, Peru?
6. How can remote sensing and geographic information systems technologies *lower the transaction costs* involved in monitoring outcomes of market-based watershed and water quality protection schemes in the Northern Forest region of New England?

7. What is the relationship between the presence of oil refinery sites, fuel-burning plants and *county-level Medicaid expenditures on asthma*?
8. What makes for an effective *eco-label* on clothing?
9. What drives *tropical deforestation*?

The course will introduce students to different social scientific disciplines, including anthropology, psychology, development studies, marketing, economics and political and policy sciences. Students will also learn about different social scientific perspectives and concepts and will apply them in a small research proposal. The proposal could be used to develop a framework for the evaluation of environmental management strategies, as the starting point for building an interdisciplinary research proposal team, or as part of the student's master's thesis or doctoral dissertation.

The class is meant for students with either a natural or social science background. Based on the course, the student will be better able to choose follow-up social science classes that are most relevant and of interest to him/her.

#### **REQUIRED READING:**

- Bennett, N.J., R. Roth, S.C. Klain, K. Chan, P. Christie, D.A. Clark, G. Cullman, D. Curran, T.J. Durbin, G. Epstein, A. Greenberg, M.P. Nelson, J. Sandlos, R. Stedman, T.L. Teel, R. Thomas, D. Veríssimo and C. Wyborn. 2017. Conservation social science: Understanding and integrating human dimensions to improve conservation. *Biological Conservation* 205: 93-108.
- The reading list for the class will primarily consist of journal articles to be made available in Adobe PDF format (see Schedule section).

**COURSE STRUCTURE SUMMARY:** The course will consist of one introductory lecture followed by topical sessions, each of which will review a major field in environmental social science.

- In each session, one student will deliver a presentation based on a representative article in environmental social science (see Schedule section).
  - The instructor will complement the presentation and follow-up discussion with content related to the article, e.g., social science methods or follow-up developments in the field.
- A quiz based on the student presentation delivered the previous week will be administered at the beginning of each session.
- Throughout the semester, each student in the class will review and present a total of two papers.

### *Presentations 1 and 2*

Students will select 2 of the journal articles assigned as reading assignments in the class, review the articles in environmental social science, prepare a presentation of the articles in class, and lead the discussion in class. The objective for these presentation assignments is to gain familiarity with reviewing scholarly journal articles, designing a presentation based upon the articles, and then delivering the presentation in class and leading the discussions in class. The skills derived from this assignment are skills students will encounter in other graduate level courses and skills for professional success. Grade weight reflects the emphasis on the development and mastery of these skills.

Please refer to the presentation assignment addendum for additional details. This document will be posted to Blackboard. Students will be permitted to choose from any of the journal articles for this presentation. The instructor will review the schedule during the first night of class.

### *Research Proposal*

Over the course of the term students will develop expertise in several social science fields through the course readings and lectures. As a final assignment for the course, students will be required to submit a small research proposal on a social science research topic of their choosing using the environmental social science approaches discussed in class.

The objective of the research proposal assignment is to apply one or more of the environmental topical frameworks from the course into the research proposal assignment. Students, through this assignment, will have the opportunity to practice developing research questions and aligning a research design to address the research questions, along with honing their presentation skills and practicing their public speaking skills to a group of peers.

Students demonstrate mastery of the concepts discussed in class by adapting or modeling one or more environmental social science frameworks to craft research questions, develop a research design, develop a short discussion of the research approach as a presentation to their peers in the classroom, and provide information on what would be needed to perform the research. Students will present their proposals in the last two sessions of the semester during the class session and submit their written research proposal by the date of their proposal presentation in class.

Students are encouraged to choose an area they already have some familiarity with, or an area for which they want to build up expertise (e.g., wildlife conservation, payment for ecosystem services, coastal flooding) in this assignment. Students can use the assignment to supplement concurrent efforts towards their research goals for their degree program. Students might choose an issue related to previous papers they have written, their master's thesis or doctoral dissertation, or an area in which they might like to study or work after graduation.

Please refer to the research proposal paper assignment addendum for additional details. This document will be posted to Blackboard.

### *Quizzes*

Quizzes will be conducted each week covering the major topics of the week's journal readings as indicated on the schedule. Quizzes will be 5 questions using a multiple-choice question format.

**COURSE GRADING:** Grades will be based on the instructor’s assessment of the presentations, quizzes and research proposals submitted by students. Weighting of these activities will be as follows:

Presentation – Article 1	30%
Presentation – Article 2	30%
Average score of all quizzes	25%
Research proposal paper and presentation	<u>15%</u>
TOTAL	100%

Final scores will be calculated based on the percentage grade earned on each of the course activities listed above, multiplied by the weighting listed for each activity. Letter grades will be assigned based on the final course score as follows:

- A = 93 - 100%
- A- = 90 - 92%
- B+ = 87 - 89%
- B = 83 - 86%
- B- = 80 - 82%
- C = 70 - 79%
- F = 0 - 69%

**ACADEMIC INTEGRITY:** GMU students, faculty and staff are bound by the GMU Honor Code. Adherence to the GMU Honor Code is expected of all students, specifically:

*Members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.*

In all assignments and communications, plagiarism will not be tolerated. This applies equally to oral and written communications in the context of any evaluated (graded) course assignments. As stated in the Honor Code, infractions may result in invalidated credit for dishonorable work and lowered grade, including failure from the class, suspension or dismissal. Inquiries for clarification from the professor are welcome. For more information see the complete Honor Code in the university catalog.

**DISABILITY ACCOMMODATIONS:** Disability Services at George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability-related services that afford equal access to university programs and activities. Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit <http://ds.gmu.edu/> for detailed information about the Disability Services registration process. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: [ods@gmu.edu](mailto:ods@gmu.edu) | Phone: (703) 993-2474.

**DIGITAL COMMUNICATION:** Students must use their GMU email account to receive important University information, including communications related to this class. I will not respond to messages sent from or send messages to a non-Mason email address.

**DIVERSITY STATEMENT:** George Mason University promotes a living and learning environment for outstanding growth and productivity among its students, faculty and staff. Through its curriculum, programs, policies, procedures, services and resources, Mason strives to maintain a quality environment for work, study and personal growth. An emphasis upon diversity and inclusion throughout the campus community is essential to achieve these goals. Diversity is broadly defined to include such characteristics as, but not limited to, race, ethnicity, gender, religion, age, disability, and sexual orientation. Diversity also entails different viewpoints, philosophies, and perspectives. Attention to these aspects of diversity will help promote a culture of inclusion and belonging, and an environment where diverse opinions, backgrounds and practices have the opportunity to be voiced, heard and respected.

## Schedule Spring Semester 2023

Date	Topic	Key References (I – Presented by instructor; S – Presented by students)
January 23	Course Overview / Introduction	Bennett <i>et al.</i> 2017. Conservation social science: Understanding and integrating human dimensions to improve conservation. <i>Biological Conservation</i> 205: 93-108. (I)
January 30	Environmental Anthropology	Hardin, R. and M.J. Remis. 2006. Biological and cultural anthropology of a changing tropical forest: A fruitful collaboration across subfields. <i>American Anthropologist</i> 108: 273–285. (S)
February 6	Conservation and Development	<p>Quiz 1 Environmental Anthropology</p> <p>Stevenson, T.C., B.N. Tissot and W.J. Walsh. 2013. Socioeconomic consequences of fishing displacement from marine protected areas in Hawaii. <i>Biological Conservation</i> 160: 50-58. (S)</p> <p>Small group brainstorm – student research proposals</p>
February 13	Environmental and Conservation Education	<p>Quiz 2 Conservation and Development</p> <p>Kuhar, C.W., T.L. Bettinger, K. Lehnhardt, O. Tracy and D. Cox. 2010. Evaluating for long-term impact of an environmental education program at the Kalinzu Forest Reserve, Uganda. <i>American Journal of Primatology</i> 72: 407–413. (S)</p>
February 20	Environmental Economics	<p>Quiz 3 Environmental and Conservation Education</p> <p>Schmalensee, R. and R. Stavins. 2019. Learning from thirty years of Cap and Trade. <i>Resources</i>. (I)</p> <p>Wilens, J.E. 2006. Why fisheries management fails: Treating symptoms rather than the cause. <i>Bulletin of Marine Science</i> 78: 529-546. (S)</p> <p>Small group brainstorm – student research proposals</p>
February 27	Environmental History	<p>Quiz 4 Environmental Economics</p> <p>Costanza <i>et al.</i> 1997. The value of the world's ecosystem services and natural capital. <i>Nature</i> 387: 253-260. (S)</p> <p>Goralik, L. and M. Nelson. 2011. Framing a Philosophy of Environmental Action: Aldo Leopold, John Muir, and the Importance of Community. <i>The Journal of Environmental Education</i> 42:181-192. (S)</p>
March 6	Environmental Humanities	<p>Quiz 5 Environmental History</p> <p>Sörlin, S. 2012. Environmental humanities: Why should biologists interested in the environment take the humanities seriously? <i>BioScience</i> 62: 788–789. (S)</p>

Date	Topic	Key References (I – Presented by instructor; S – Presented by students)
March 13	-	SPRING BREAK NO CLASS
March 20	Environmental and Conservation Law	<p><b>Quiz 6 Environmental Humanities</b></p> <p>Gellers, J.C. In Press. Earth system law and the legal status of non-humans in the Anthropocene. <i>Earth System Governance</i>. (S)</p> <p><b>Small group brainstorm – student research proposals</b></p>
March 27	Conservation Marketing	<p><b>Quiz 7 Environmental and Conservation Law</b></p> <p>Wright, A.J. <i>et al.</i> 2015. Competitive outreach in the 21st century: Why we need conservation marketing. <i>Ocean &amp; Coastal Management</i> 115: 41–48. (I)</p> <p>Martinez, R., K.M. Green and A. DeWan. 2013. Establishing reciprocal agreements for water and biodiversity conservation through a social marketing campaign in Quanda Watershed, Peru. <i>Conservation Evidence</i> 10: 42–47. (S)</p>
April 3	Political Ecology	<p><b>Quiz 8 Conservation Marketing</b></p> <p>Cole, S. 2012. A political ecology of water equity and tourism: A case study from Bali. <i>Annals of Tourism Research</i> 39: 1221-1241. (S)</p>
April 10	Political Science (Environmental Governance)	<p><b>Quiz 9 Political Ecology</b></p> <p>Brenner, L. and H. Job. 2012. Challenges to actor-oriented environmental governance: Examples from three Mexican biosphere reserves. <i>Tijdschrift voor Economische en Sociale Geografie</i> 103: 1-19. (S)</p> <p><b>Small group brainstorm – student research proposals</b></p> <p><b>Quiz 10 Political Science (Environmental Governance)</b></p>
April 17	Psychology	<p>Pickering, J. <i>et al.</i> 2018. Using psychology to understand practice change among sugar cane growers. <i>Rural Extension &amp; Innovation Systems Journal</i> 14: 62-72. (S)</p>
April 24		<p><b>Quiz 11 Psychology</b></p> <p>Presentation of proposals by students</p>
May 1		Presentation of proposals by students and course wrap up