

NRRT 605 Course Outline, Fall 2015
Human Dimensions of Natural Resources Theory*

Department of Human Dimensions of Natural Resources
Warner College of Natural Resources
Colorado State University

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Office Hours
Thursdays 12-1pm
and by appointment

*Note: Syllabus subject to change at instructors' discretion

Schedule: The class meets Thursdays 2:00-4:30pm in Forestry 217. Course ID#: 65589, Section 001, 3 credits.

I. COURSE DESCRIPTION

The purpose of this graduate-level course is to review social science concepts and research important to the management and conservation of natural resources. Through readings on social science theory and its application in a natural resources context, students will be exposed to current conservation issues and learn how those issues can be addressed through an understanding of human thought and behavior. Case studies will be presented and discussed in class in order to connect theoretical frameworks to on the ground management problems. The course will begin with an introduction to the human dimensions of natural resources field of study, including key themes of research on the social aspects of outdoor recreation. This will be followed by an in-depth look at social psychology applications, and then by an examination of contributions of other social science disciplines to conservation and natural resource-related topics.

II. COURSE OBJECTIVES

This course will review major concepts, theories, and disciplinary perspectives in human dimensions of natural resources. Through this course, students will:

- Understand the role and importance of human dimensions research in conservation and natural resource management
- Understand the role of theory in human dimensions research
- Become familiar with specific social science concepts and theories commonly applied in human dimensions
- Realize the varied contributions and approaches of different social science disciplines to the human dimensions field

In addition to providing students with information in these areas, an outcome of the course may be to spark ideas for thesis or dissertation research.

III. COURSE MATERIALS

1. Required Text:

Manfredo, M. J. (2008). *Who cares about wildlife: Social science concepts for exploring human-wildlife relationships and conservation issues*. New York: Springer Press.

[Referred to in syllabus as "Social Science Concepts" - Purchase at CSU Bookstore]

2. Required Articles/Book Chapters:

Additional readings will be assigned for certain topics. These readings are noted on the syllabus and will be made available to you on Canvas (or in some cases via email and/or website links) prior to the class session in which they will be discussed.

IV. COURSE POLICY AND PROCEDURE

Academic Integrity

This course will adhere to CSU's Student Conduct Code and Academic Integrity Policy described in the 2015-2016 General Catalog: <http://www.catalog.colostate.edu>. All students are expected to familiarize themselves with these policies.

Student Athletes / Special Needs

If you are a student with university-approved circumstances that require special accommodations, it is your responsibility to let me know your needs at the beginning of the semester. I will then be able to make accommodations to assist you and help you succeed in this class.

Attendance and Participation

Prompt attendance of class sessions is a requirement for this course. You are expected to do the readings and come to class prepared for discussion. If you need to miss a class, please let me know in advance. It is your responsibility to communicate with me and/or fellow classmates regarding announcements and course content that were covered during a missed class.

Written Assignments

Written assignments completed outside of class must be typed and double-spaced and use American Psychological Association (APA, 6th Edition) style for formatting in-text citation of references and reference lists. I encourage you to take advantage of the University's writing center for assistance with written assignments. Details can be found at <http://writing.colostate.edu/>. Also see <http://www.apastyle.org/> and <https://owl.english.purdue.edu/owl/section/2/10/> for more details on APA formatting.

Late Assignments, Makeup Work, and Extra Credit

All assignments are due **via email** no later than the beginning of class on the designated date. Late assignments will be de-valued at 5% per day, including weekends, and will be assigned a zero after five days. If at any time you are concerned about your grade in this course, you are encouraged to communicate with me as soon as possible. Do not wait until the end of the semester if you are having problems with the class or assignments. There will be no extra credit offered in this course.

V. COURSE REQUIREMENTS & GRADING

Grades will be based on performance on:

- Thought/Reaction Papers: At various times throughout the semester, students will be asked to write a brief (2-3 pages, double-spaced) paper to demonstrate thinking about course topics. Papers (total of 6) will be developed outside of class, and due dates are noted in the syllabus.
- Class Participation/Discussion: Students are expected to complete the assigned readings and participate in class discussions. Students will also be asked to select a topic area relevant to the course and lead an in-class session on that topic area. Student-led sessions are noted in the syllabus, and additional information about content and expectations for these sessions will be provided in class.
- Final Paper: Students will write a paper on a particular "theoretical or conceptual domain" relevant to the course and to their research pursuits. This paper will provide an extensive literature review on the domain of interest, demonstrating how it has been applied and why it is important to understand in a conservation / natural resource-related context. Papers must be between 10 and 20 double-spaced pages (not including reference lists) and contain a minimum of 20 references (beyond any listed on the syllabus). More specific guidelines for the final paper, due **December 14**, will be provided in class.

Points for specific assignments:

<u>Grading Summary</u>	<u>Percent of Grade</u>	<u>Total Points</u>
Class Participation/Discussion	35%	35
Thought/Reaction Papers (6 @ 5 points each)	30%	30
Final Paper	<u>35%</u>	<u>35</u>
	100% Total	100

Grades will be based on the total points accumulated from requirements listed above.

Instructor will use +/- Grading. Grades will be assigned as follows.

Letter Grade	Percentage %	Points
A+	98+	98+
A	94-97	94-97
A-	90-93	90-93
B+	88-89	88-89
B	84-87	84-87
B-	80-83	80-83
C+	78-79	78-79
C	70-77	70-77
D	60-69	60-69
F	Less than 60	Less than 60

VI. COURSE CONTENT AND TENTATIVE SCHEDULE*

***Note:** The instructor reserves the right to change this schedule at any time during the semester. Changes to the schedule will be announced in class.

SECTION I:

OVERVIEW OF HUMAN DIMENSIONS OF NATURAL RESOURCES

August 27th

- **Course Introduction & Review Expectations for Class Assignments**

September 3rd

- **Human Dimensions of Natural Resources: An Introduction & Overview**

Social Science Concepts: Chapter 1

Field, D. R., Brown, P. J., & Burdge, R. J. (2004). Coming in from the dark: The evolution of ISSRM and social science research in resource management. In M. J. Manfredo, J. J. Vaske, B. L. Bruyere, D. R. Field, & P. J. Brown (Eds.), *Society and natural resources: A summary of knowledge* (pp. 1-8). Jefferson, MO: Modern Litho.

Stankey, G. H., & McCool, S. F. (2004). Social sciences and natural resources management: An assessment of advances. In M. J. Manfredo, J. J. Vaske, B. L. Bruyere, D. R. Field, & P. J. Brown (Eds.), *Society and natural resources: A summary of knowledge* (pp. 21-34). Jefferson, MO: Modern Litho.

Ewert, A. W. (1996). Human dimensions research and natural resource management. In A. W. Ewert (Ed.), *Natural resource management: The human dimension* (pp. 5-12). Boulder, CO: Westview Press.

Mascia, M. B., Brosius, J. P., Dobson, T. A., Forbes, B. C., Horowitz, L., McKean, M. A., & Turner, L. A. (2003). Conservation and the social sciences. *Conservation Biology*, 17(3), 649-650.

Sandbrook, C., Adams, W. M., Buscher, B., & Vira, B. (2013). Social research and biodiversity conservation. *Conservation Biology*, 27(6), 1487-1490.

Additional Background (Not Required):

Bennett, N. J., & Roth, R. (Eds.) (2015). *The conservation social sciences: what? how? and why?* Vancouver, BC: Canadian Wildlife Federation and Institute for Resources, Environment and Sustainability, University of British Columbia.

ISSC & UNESCO. (2013). *World Social Science Report 2013, Changing Global Environments*. Paris: OECD Publishing and UNESCO Publishing.

Lowe, P., Whitman, G., & Phillipson, J. (2009). Ecology and the social sciences. *Journal of Applied Ecology*, 46, 297-305.

Adams, W. M. (2007). Thinking like a human: social science and the two cultures problem. *Oryx* 41(3), 1-2.

Fox, H. (2006). Perceived barriers to integrating social science and conservation. *Conservation Biology*, 20(6), 1817-1820.

Redford, K. H. (2011). Misreading the conservation landscape. *Oryx*, 45(3), 324-330.

Lele, S. (2011). Rereading the interdisciplinary mindscape: A response to Redford. *Oryx*, 45(3), 331-332.

Igoe, J. (2011). Rereading conservation critique: A response to Redford. *Oryx*, 45(3), 333-334.

Redford, K. (2011). Crabs and kairos: A reply to Lele and Igoe. *Oryx*, 45(3), 335.

September 10th

- o **Human Dimensions of Natural Resources: An Introduction & Overview (Cont'd)**

See Readings for 9/3

SECTION II:

THE SOCIAL ASPECTS OF OUTDOOR RECREATION

September 17th

***DUE: THOUGHT PAPER 1 - The Human Dimensions of Natural Resources Field of Study**

- o **Social Aspects of Recreation: Overview of Research Themes & Applications**

Manning, R. E. (2011). *Studies in outdoor recreation: Search and research for satisfaction*. Corvallis, OR: Oregon State University Press. (Chapters 1 & 2).

Manning, R. E. (2004). Recreation planning frameworks. In M. J. Manfredo, J. J. Vaske, B. L. Bruyere, D. R. Field, & P. J. Brown (Eds.), *Society and natural resources: A summary of knowledge* (pp. 83-96). Jefferson, MO: Modern Litho.

Graefe, A. R. & Thapa, B. (2004). Conflict in natural resource recreation. In M. J. Manfredo, J. J. Vaske, B. L. Bruyere, D. R. Field, & P. J. Brown (Eds.), *Society and natural resources: A summary of knowledge* (pp. 209-224). Jefferson, MO: Modern Litho.

- o **Motivations & Experience-Based Management**

Manfredo, M. J., Ed. (2002). *Wildlife Viewing in North America: A Management Planning Handbook*. Oregon State University Press, Corvallis. (Chapter 5).

Manning, R. E. (2011). *Studies in outdoor recreation: Search and research for satisfaction*. Corvallis, OR: Oregon State University Press. (Chapter 8).

Csikszentmihalyi, M. (1982). Toward a psychology of optimal experience. In L. Wheeler (Ed.), *Review of Personality and Social Psychology*, Vol. 3 (pp. 13-36). Newbury Park, CA: Sage.

September 24th

***DUE: THOUGHT PAPER 2 - Managing for Optimal Experience (Csikszentmihalyi's Flow Theory)**

- ***Class Project Session***

October 1st

***DUE: FINAL PAPER & STUDENT-LED SESSION TOPICS**

- **Social Aspects of Recreation (Cont'd)**

See Readings for 9/17

SECTION III:

UNDERSTANDING HUMAN THOUGHT & BEHAVIOR - A SOCIAL PSYCHOLOGY APPROACH

October 8th

- **Overview of a (Social) Psychology Approach in Conservation & Natural Resources; Introduction to Attitude/Behavior Theory**

Clayton, S. D., & Saunders, C. D. (2009). *Psychology. Catalog of Conservation Social Science Tools*, Social Science Working Group, Society for Conservation Biology.

Clayton, S. D., & Saunders, C. D. (2012). Introduction: Environmental and conservation psychology. In S. D. Clayton (Ed.), *The Oxford handbook of environmental and conservation psychology* (pp. 1-7). New York, NY: Oxford University Press.

Teel, T. L., Dietsch, A. M., & Manfredi, M. J. (2015). A (social) psychology approach in conservation. In Bennett, N. J., & Roth, R. (eds.), *The conservation social sciences: what? how? and why?* Vancouver, BC: Canadian Wildlife Federation and Institute for Resources, Environment and Sustainability, University of British Columbia.

Manfredi, M. J., Teel, T. L., & Bright, A. D. (2004). Application of the concepts of values and attitudes in human dimensions of natural resources research. In M. J. Manfredi, J. J. Vaske, B. L. Bruyere, D. R. Field, & P. J. Brown (Eds.), *Society and natural resources: A summary of knowledge* (pp. 271-282). Jefferson, MO: Modern Litho.

- **Attitudes**

Social Science Concepts: Chapter 4

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall. (Chapter 6 & Appendix A).

Heberlein, T. (2012). Navigating environmental attitudes. *Conservation Biology*, 26(4), 583-585.

Additional Background (Not Required):

Gifford, R. (2014). Environmental psychology matters. *Annual Review of Psychology*, 65, 541-579.
St. John, F. A. V., Edwards-Jones, G., & Jones, J. P. G. (2010). Conservation and human behavior: Lessons from social psychology. *Wildlife Research*, 37, 658-667.

Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. New York, NY: Taylor & Francis.

October 15th

***MID-SEMESTER COURSE EVALUATION**

o **Values**

Social Science Concepts: Chapter 6

Rohan, M. J. (2000). A rose by any name? The values construct. *Personality and Social Psychology Review*, 4, 255-277.

Manfredo, M. J., Teel, T. L., & Henry, K. L. (2009). Linking society and environment: A multi-level model of shifting wildlife value orientations in the western U.S. *Social Science Quarterly*, 90(2), 407-427.

de Groot, J. I. M., & Steg, L. (2008). Value orientations to explain beliefs related to environmental significant behavior: How to measure egoistic, altruistic, and biospheric value orientations. *Environment and Behavior*, 40(3), 330-354.

o **Norms**

Social Science Concepts: Chapter 5

Vaske, J. J., & Whittaker, D. (2004). Normative approaches to natural resources. In M. J. Manfredo, J. J. Vaske, B. L. Bruyere, D. R. Field, & P. J. Brown (Eds.), *Society and natural resources: A summary of knowledge* (pp. 283-294). Jefferson, MO: Modern Litho.

Griskevicius, V., Cialdini, R. B., & Goldstein, N. (2008). Social norms: An underestimated and underemployed lever for managing climate change. *International Journal of Sustainability Communication*, 3, 5-13.

October 22nd

***DUE: THOUGHT PAPER 3 - Topic TBD**

o **Attitude/Behavior Change & Communication Lessons Learned from Social Psychology**

Clayton, S., Litchfield, C., & Geller, S. E. (2013). Psychological science, conservation, and environmental sustainability. *Frontiers in Ecology and the Environment*, 11(7), 377-382.

Schultz, P. W. (2011). Conservation means behavior. *Conservation Biology*, 25(6), 1080-1083.

McKenzie-Mohr, D., Lee, N. R., Schultz, P. W., & Kotler, P. (2012). *Social marketing to protect the environment: What works*. Thousand Oaks, CA: Sage Publications. (Chapter 1).

Schweizer, S., Thompson, J., Teel, T., & Bruyere, B. (2009). Strategies for communicating about climate change impacts on public lands. *Science Communication*, 31(2), 266-274.

Teel, T. L., Bright, A. D., Manfredo, M. J., & Brooks, J. J. (2006). Evidence of biased processing of natural resource-related information: A study of attitudes toward drilling for oil in the Arctic National Wildlife Refuge. *Society and Natural Resources*, 19(5).

Additional Background (Not Required):

Cialdini, R. B. (2003). Crafting normative messages to protect the environment. *Current Directions in Psychological Science*, 12, 105-109.

Akerlof, K., & Kennedy, C. (2013). *Nudging toward a healthy natural environment: How behavioral change research can inform conservation*. Fairfax, VA: George Mason University.

Ardoin, N., Heimlich, J., Braus, J., & Merrick, C. (2013). *Influencing conservation action: What research says about environmental literacy, behavior, and conservation results*. New York, NY: National Audubon Society.

Verissimo, D. (Ed.) (2013). Behaviour change. Special issue in *Conservation Evidence*, 10, 29-66.

Crompton, T. (2010). *Common cause: The case for working with our cultural values*. Surrey, UK: WWF-UK. (also see <http://valuesandframes.org/>)

Conservation on a human scale: The RARE approach. (brochure materials posted, also see www.rareconservation.org)

SECTION IV:

EMERGING THEMES & NEW DIRECTIONS IN SOCIAL PSYCHOLOGY APPLICATIONS

October 29th

***DUE: THOUGHT PAPER 4 - Biophilia**

- **Emerging Themes & New Directions in Social Psychology Applications: A Brief Overview**
- **A Biological Basis for Human Behavior?**

Social Science Concepts: Chapter 2

Wilson, E. O. (1993). Biophilia and the conservation ethic. In S. R. Kellert, & E. O. Wilson (Eds.), *The Biophilia Hypothesis* (pp. 31-41). Washington, DC: Island Press.

Katcher, A. & Wilkins, G. (1993). A dialogue with animals: Its nature and culture. In S. R. Kellert, & E. O. Wilson (Eds.), *The Biophilia Hypothesis* (pp. 173-197). Washington, DC: Island Press.

- **Emotions**

Social Science Concepts: Chapter 3

Additional Background (Not Required):

Kals, E., & Muller, M. M. (2012). Emotions and environment. In S. D. Clayton (Ed.), *The Oxford handbook of environmental and conservation psychology* (pp. 128-147). New York, NY: Oxford University Press.

November 5th

***DUE: FINAL PAPER OUTLINE**

- **Psychology & Social-Ecological Systems Science**

Liu, J., et al. (2007). Complexity of coupled human and natural systems. *Science*, *317*, 1513-1516.

Ostrom, E. (2009). A general framework for analyzing sustainability of social-ecological systems. *Science*, *325*, 419-422.

Nelson, D. R., Adger, W. N., & Brown, K. (2007). Adaptation to environmental change: Contributions of a resilience framework. *Annual Review of Environment and Resources*, *32*, 395-419.

Manfredo, M. J., Teel, T. L., Gavin, M., & Fulton, D. (2014). Considerations in representing human individuals in social-ecological models. In M. J. Manfredo, J. J. Vaske, A. Rechkemmer, & E. A. Duke (Eds.), *Understanding society and natural resources: Forging new strands of integration across the social sciences*. New York: Springer Press.

- **The One Health Concept**

Kahn, L. H., Monath, T. P., Bokma, B. H., Gibbs, E. P., & Aguirre, A. A. (2012). One Health, One Medicine. In A. A. Aguirre, R. S. Ostfeld, & P. Daszak (Eds.), *New directions in conservation medicine: Applied cases of ecological health* (pp. 33-44). New York: Oxford University Press.

Osofsky, S. A., et al. (2005). Building support for protected areas using a "One Health" perspective. In J. A. McNeely (Ed.), *Friends for life: New partners in support of protected areas* (pp. 65-79). Gland, Switzerland and Cambridge, UK: IUCN.

One Health Initiative Websites (links will be provided)

Additional Background (Not Required):

Oishi, S. (2014). Socioecological psychology. *Annual Review of Psychology*, *65*, 581-609.

Redman, C. L., Grove, J. M., Kuby, L. H. (2004). Integrating social science into the Long-Term Ecological Research (LTER) network: Social dimensions of ecological change and ecological dimensions of social change. *Ecosystems*, *7*(2), 161-171.

Glaser, M., Krause, G., Ratter, B., & Welp, M. (2008). Human/nature interaction in the Anthropocene: Potential of social-ecological systems analysis. *GAI A*, 17, 77-80.

Collins, S. L., et al. (2011). An integrated conceptual framework for long-term social-ecological research. *Frontiers in Ecology and the Environment*, 9(6), 351-357.

SECTION V:

MORE ON THE CONTRIBUTIONS OF DIFFERENT SOCIAL SCIENCE DISCIPLINES

November 12th

***DUE: THOUGHT PAPER 5 - Children & Nature Movement**

- o **More on the Contributions of Different Social Science Disciplines: A Brief Overview**
- o ***Environmental Education & Communication***

Zint, M., & Higgs, A. (2009). *Education*. Catalog of Conservation Social Science Tools, Social Science Working Group, Society for Conservation Biology.

Hungerford, H. R., & Volk, T. L. (1990). Changing learner behavior through environmental education. *Journal of Environmental Education*, 21, 8-21.

Louv, R. (2005). *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill, NC: Algonquin Books. (Chapter 12).

Bruyere, B., Teel, T., & Newman, P. (2009). Response to "More Kids in the Woods: Reconnecting Americans with Nature." *Journal of Forestry*, October/November, 378-379.

Children & Nature Network website: <http://www.childrenandnature.org/>

Additional Background (Not Required):

Bratman, G. N., Hamilton, J. P., Hahn, K. S., Daily, G. C., & Gross, J. J. (2015). Nature experience reduces rumination and subgenual prefrontal cortex activation. *Proceedings of the National Academy of Sciences*, 112(28), 8567-8572.

Chawla, L., & Derr, V. (2012). The development of conservation behaviors in childhood and youth. In S. D. Clayton (Ed.), *The Oxford handbook of environmental and conservation psychology* (pp. 527-555). New York, NY: Oxford University Press.

November 19th

- o **Contributions of *Anthropology* and *Sociology* to Conservation & Natural Resources**

Russell, D. (2009). *Anthropology*. Catalog of Conservation Social Science Tools, Social Science Working Group, Society for Conservation Biology.

Peterson, R. B., Russell, D., West, P., & Brosius, J. P. (2010). Seeing (and doing) conservation through cultural lenses. *Environmental Management*, 45, 5-18.

Buttel, F. H., & Field, D. R. (2004). Environmental and natural resource sociologies. In M. J. Manfredo, J. J. Vaske, B. L. Bruyere, D. R. Field, & P. J. Brown (Eds.), *Society and natural resources: A summary of knowledge* (pp. 235-247). Jefferson, MO: Modern Litho.

Lidskog, R., Mol, A. P. J., & Oosterveer, P. (2014). Towards a global environmental sociology? Legacies, trends, and future directions. *Current Sociology*, 1-30.

Additional Background (Not Required):

Cullman, G. (2015). A primer on environmental anthropology for conservation biologists. In Bennett, N. J., & Roth, R. (eds.), *The conservation social sciences: what? how? and why?* (pp. 7-11). Vancouver, BC: Canadian Wildlife Federation and Institute for Resources, Environment and Sustainability, University of British Columbia.

Stedman, R. C. (2015). Conservation and sociology. In Bennett, N. J., & Roth, R. (eds.), *The conservation social sciences: what? how? and why?* (pp. 12-16). Vancouver, BC: Canadian Wildlife Federation and Institute for Resources, Environment and Sustainability, University of British Columbia.

o ***Student-Led Sessions***

November 26th

****FALL RECESS - NO CLASSES THIS WEEK****

December 3rd

o **Contributions of *Political Science* and *Economics* to Conservation & Natural Resources**

Miller, D. (2009). *Political Science*. Catalog of Conservation Social Science Tools, Social Science Working Group, Society for Conservation Biology.

Agrawal, A., & Ostrom, E. (2006). Political science and conservation biology: A dialog of the deaf. *Conservation Biology*, 20, 681-682.

Raheem, N. (2009). *Economics*. Catalog of Conservation Social Science Tools, Social Science Working Group, Society for Conservation Biology.

Loomis, J. (2004). The role of economics in managing natural resources for society. In M. J. Manfredo, J. J. Vaske, B. L. Bruyere, D. R. Field, & P. J. Brown (Eds.), *Society and natural resources: A summary of knowledge* (pp. 295-304). Jefferson, MO: Modern Litho.

Additional Background (Not Required):

Epstein, G. (2015). Political science, environmental governance and conservation. In Bennett, N. J., & Roth, R. (eds.), *The conservation social sciences: what? how? and why?* (pp. 26-30). Vancouver, BC: Canadian Wildlife Federation and Institute for Resources, Environment and Sustainability, University of British Columbia.

Chan, K. M. A., Barkusky, M., & Klain, S. C. (2015). Ecological economics and its potential role in conservation. In Bennett, N. J., & Roth, R. (eds.), *The conservation social sciences: what? how? and why?* (pp. 17-20). Vancouver, BC: Canadian Wildlife Federation and Institute for Resources, Environment and Sustainability, University of British Columbia.

- ***Student-Led Sessions***

December 10th

***FINAL COURSE EVALUATION**

***DUE: THOUGHT PAPER 6 - 100 Questions Exercise**

- **"Milking the Rhino"** Video: Challenges & Opportunities for Integrating Human Livelihood Considerations in Conservation
- Bringing It All Together: **A Case Study Exercise** Integrating Different Social Science Perspectives

Week of December 14th (FINAL EXAMS WEEK)

***FINAL PAPER DUE MONDAY, DECEMBER 14, 5:00 PM**