

HUMAN DIMENSIONS OF NATURAL RESOURCE MANAGEMENT
EnvS 4000 (DSS)
Fall 2004

MEETINGS: T, Th, 10:30-11:45, BNR 314

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DESCRIPTION:

This course presents social science principles that are important for understanding and addressing natural resource and environmental (NR/E) problems. The goal of the course is to introduce: 1) concepts that help explain *why* humans impact the environment as they do, and 2) methods to help address community and environmental sustainability issues. The concepts come primarily from sociology, social psychology, and political science, but we will also discuss ideas from communications, philosophy, anthropology, and management. The emphasis of the course is on integrating social science in natural resource decision-making, and on thinking critically and analytically. The course is divided into three parts:

1. Behavioral bases for human impacts on the environment.

This is an overview of social, cultural, and organizational principles that help to explain relationships between humans and the biophysical environment in a historical, contemporary, and international context.

2. Promoting environmental sustainability: Attitudes, norms, and behavior change strategies.

We will discuss the structure and function of peoples' attitudes toward the environment and social norms and patterns of interaction, and how these principles can be used with education, communication, social influence, and other strategies for changing attitudes and behavior.

3. Promoting community sustainability: Using social values in NR/E management & decision-making.

Here we focus on decision making processes, conflict and its management, public involvement and collaboration principles, and social impact analysis.

READINGS:

There is no course text. Required readings are on electronic reserve in the Sci Tech Library (password: BLA4000) or they will be handed out in class. ***The readings are a critical part of this course.*** Lectures and class discussion often focus on the readings, so you need to look at them ***before the class for which they are listed.*** Exams and written assignments will assume you've read *all* of the readings.

COURSE GRADING:

First midterm exam (~24%)
Second midterm exam (~24%)
Final exam (~24%)
Three issue analysis papers (~23% total)
Weekly readings & class participation (~7%)

Grading will be based on a total of 355 points; exams will be worth about 250 points (~90 points each), issue paper assignments will be worth about 80 points (25-30 points each), and about 25 points for class attendance and participation.

Exams. There will be three exams, one for each section of the course. Exams will consist of short answer and essay questions. Exams from past years are on reserve in the Quinney Library. *Some exam questions will be taken from, or based on, questions from old exams.*

Issue papers. There will be three short (2 to 3 page) issue analysis papers, one for each section of the course. The purpose of the papers will be to analyze the human dimensions of specific natural resource or environmental issues that were not discussed in class. Case study topics, papers, or data will be handed out in class, and your job will be to analyze one of these issues, *or an issue of your choice*, using the concepts from the readings or class discussion. No outside readings or sources will be required. **Please be careful to focus on the social, not the biophysical, aspects of the cases.** Also, *cite course readings and discussion where appropriate in the text.* You should be able to use three or four of the course readings for each assignment. When, stating your personal opinion, but be sure to identify it as such.

Readings and participation. This course is about half lecture and half discussion, so questions and class participation are encouraged. But since this is a relatively large class and it can be hard for everyone to participate, and since many people struggle with some of the readings (that is a polite way of saying some of them are long and boring), I will hand out 8 or 10 one-page reading worksheets. The purpose of the worksheets is to help you focus on the key aspects of the readings. They are *optional*, in that they will be worth only about one to three points each (total of about 20-25 points or about 7% of your grade), which usually won't cost you more than half a letter grade overall. But I strongly encourage that you do the worksheets to help you focus on the readings and to think about topics that may come up for discussion during the class.

HONORS/GRADUATE REQUIREMENTS:

There is a separate, *required* paper for students who are taking the course for graduate (EnvS 6930) or honors (contract) credit. The paper should be a *maximum* of 10 pages (7 or 8 pages recommended) on a natural resource conflict or issue of your choice. It should include a brief introduction to the issue, an analysis of the issue based on principles discussed in class (or other social science concepts), and recommendations for managing the conflict. The paper should include at least five references from the course readings and *at least two references to social science data* but at least one of which comes from outside of the course readings. (Use the course reading list for the format for citing references in your *Literature Cited* section.) The paper is due the last day of class, and will be worth 60 points or about 15% of your course grade (total of 415 points).

DISABILITY RESOURCE CENTER:

The university is required by law to help disabled students participate fully in all programs, activities, and services. If you have a disability documented by the Disability Resource Center that requires note-takers, interpreters for the deaf, extended testing time, etc., contact me or let the Disability Resource Center know as soon as possible. The Disability Resource Center may also help provide course material in alternative formats like large print, Braille, and diskette.

NOTE ON CHEATING:

The College of Natural Resources has adopted a *zero tolerance* policy for cheating and plagiarism on tests, homework, and paper assignments. The *least* that can happen to someone who cheats is to *fail the entire course*. Due to the relatively unique subject matter of this course, it is quite easy to identify both plagiarism and cheating.

COURSE OUTLINE

Aug. 31 Introduction to A human dimensions@
Readings: Jacobson & McDuff

Sept. 2 Types of natural resource problems and A claims@
Readings: Allen & Gould; Schmidt

Part I. Behavioral Bases for Human Impacts

Sept. 7 The A roots@ of human impacts: proximate vs. ultimate causes
Readings: White; Catton; Ponting

Sept. 9 The general problem of the A commons@
Readings: Hardin; Walters

Sept. 14 Natural resource institutions and agency culture
Readings: Kennedy & Thomas; Brunson

Sept. 16 Social equity and environmental justice
Readings: Simon; Bullard & Wright; Harmon

Sept. 21 Hungry for Profit, Part 1
Reading: Brechin & West; Stoll-Kleeman & O=Riordan

Sept. 23 Hungry for Profit, Part 2
Readings: Tear & Forester

Sept. 28 Resource dependency and environmental restoration
Readings: Wilson; **Issue Analysis Paper #1 due**

Sept. 30 Ecosystem management: Blending environmental & community sustainability
Readings: Gilmore; Schelhas *et al.*

Oct.5 First midterm Exam

Part II. Promoting Environmental Sustainability: Attitudes, Norms, and Behavior Change

Oct. 7 Attitudes, beliefs, and preferences
Readings: Manfredo *et al.* 1995

Oct.12 Attitudes toward prescribed fire, wolves . . .
Readings: Manfredo *et al.* 1990; Bath

Oct. 14 Changing attitudes: The role of knowledge & beliefs
Readings: Cole *et al.*; Heberlein 1992

Oct. 19 Changing behavior: Communication and persuasion strategies

Readings: Oliver *et al.*; Widner & Roggenbuck; Wirsching *et al.*; Fox

- Oct. 21 Changing behavior with incentives (behavior modification)
Readings: Heberlein 1974; Pryor; Nickerson
- Oct. 26 Cultural values, social norms and depreciative behavior (poaching film)
Reading: Meeker; Prettyman
- Oct. 28 Changing behavior with social influence (formal/informal social control)
Readings: Dolittle & Welch; **Issue analysis paper**
- Nov. 2 Changing behavior with social influence (adoption-diffusion)
Readings: Muth & Hendee; Rogers & Shoemaker
- Nov. 4 Changing behavior with social influence (adoption-diffusion)
Readings: Mailo *et al.*

Nov. 9 **Second midterm exam**

Part III. Community Sustainability: Using Social Values in NR/E Management & Decision-making

- Nov. 11 Participatory democracy and collaborative stewardship
Reading: Cortner & Moote; Wellman & Tipple
- Nov. 16 Environmental conflict: The order-conflict debate
Readings: Floyd; Moore & Barthlow
- Nov. 18 Managing conflict: Communication, trust, & procedural justice
Readings: Rasmussen & Brunson; Lawrence *et al.*
- Nov. 23 Managing conflict: Public involvement & collaboration (guest speaker)
Readings: Beierle; Walker & Daniels
- Nov. 25 **No class: Thanksgiving break**
- Nov. 30 Collaboration in action (guest speaker)
Readings: National Collaboration Stewardship Team; Van de Wetering
- Dec. 2 Barriers to collaboration
Readings: Selin *et al.*; Blahna & Yonts-Shepard
- Dec. 7 Forms of collaboration: Co-management, CRM, Enlibra
Readings: De Lacy; Yaffee & Wondolleck **Issue analysis paper #3**
- Dec. 9 Using social *science*: Social impact assessment
Readings: Bryan; Burdge
- Dec. 16 **Final Exam, 11:30-1:20 (BNR 314)**

ENVS 4000 READING LIST

Introduction B Why Social Science?

Jacobson, S.K. and M.D. McDuff. 1998. Training idiot savants: The lack of human dimensions in conservation biology. Conservation Biology 12(2): 263-267.

Allen, G.M., and E.M. Gould. 1986. Complexity, wickedness, and public forests. Journal of Forestry 84(4): 20-23.

Schmidt, John C. 1995. Choices to make in the Grand Canyon. *Currents*. 60(Summer):4.

Part I. Behavioral Bases for Natural Resource Problems

White, L. Jr. 1967. The historical roots of our ecologic crisis. Science 155 (March):1203-1207.

Catton, W.R. 1980. Nature and the nature of man. Ch. 9 in Overshoot: The Ecological Basis of Revolutionary Change. Urbana, IL: University of Illinois Press.

Ponting, C. 1991. The lessons of Easter Island. Ch. 1 in A Green History of the World: The Environment and the Collapse of Great Civilizations. New York, NY: Penguin.

Hardin, G. 1968. The tragedy of the commons. Science 162:1243-1248.

Walters, M. 1989. California=s chain-saw massacre. Reader=s Digest. Nov., pp. 144-149.

Kennedy, J.J. and J.W. Thomas. 1995. Managing natural resources as social value. Ch.18 in R.L. Knight and S.F. Bates (eds.), A New Century for Natural Resources Management: Washington, DC: Island Press.

Brunson, M.W. 1992. Professional bias, public perspectives, and communication pitfalls for natural resource managers. Rangelands 14(5):292-295.

Simon, J. 1989. The population debate: the case for more people. P. 126 in Chiras, Environmental Science.

Bullard, R.D., and B.H. Wright. 1990. The quest for environmental equity: mobilizing the African-American community for social change. Society and Natural Resources 3:301-311.

Harmon, D. 1987. Cultural diversity, human subsistence, and the national park ideal. Environmental Ethics 9(Spring): 147-158.

Brechin, S.R. and P.C. West. 1982. Social barriers in implementing appropriate technology: The case of community forestry in Niger, West Africa. Humboldt Journal of Social Relations 9(2): 81-99.

Stoll-Kleeman, S. and O=Riordan. 2002. From participation to partnership in biodiversity protection: Experience from Germany and South Africa. Society & Natural Resources 15: 161-177.

Tear, T.H., and D. Forester. 1992. Role of social theory in reintroduction planning: a case study of the Arabian oryx in Oman. Society and Natural Resources 5:359-374.

Wilson, M.A. 1997. The wolf in Yellowstone: science, symbol, or politics: deconstructing the conflict

between environmentalism and wise use. Society and Natural Resources 10:453-468.

Gilmore, D.W. 1997. Ecosystem management needs driven, resource-use philosophy. The Forestry Chronicle 73(5): 560-564.

Schelhas, J. R.E Sherman, T.J. Fahey, and J.P. Lassoie. 2002. Linking community and national park development: A case from the Dominican Republic. Natural Resources Forum 26: 140-149.

Part II. Environmental Sustainability: Attitudes, Norms, and Behavior Change Strategies

Manfredo, M.J., Vaske, J.J., and D.J. Decker. 1995. Human dimensions of wildlife management: basic concepts, , in R. Knight and K. Gutzwiller, eds., Wildlife and Recreationists: Coexistence through Management and Research. Washington, DC: Island Press.

Manfredo, M.J., M. Fishbein, G.E. Haas and A.E. Watson. 1990. Attitudes toward prescribed fire policies. Journal of Forestry 88(7):19-23.

Bath, A.J. 1989. The public and wolf reintroduction in Yellowstone National Park. Society & Natural Resources 2: 297-306.

Cole, D.N., T.P. Hammond, and S.F. McCool. 1997. Information quantity and communication effectiveness: Low-impact messages on wilderness trails bulletin boards. Leisure Sciences 19: 59-72.

Heberlein, T.A. 1992. Reducing hunter perception of crowding through information. Wildlife Society Bulletin 20:372-374.

Oliver, S.S, J.W. Roggenbuck, and A.E. Watson. 1985. Education to reduce impacts in forest campgrounds. Journal of Forestry 83(4): 234-236.

Widner, C.J. and J.W. Roggenbuck. 2000. Reducing theft of petrified wood at Petrified Wood Forest National Park. Journal of Interpretation 5(1): 1-18.

Wirsching, A. Y. Leung, A. Attarian. 2003. Swatting litter bugs: What agencies can do to decrease depreciative behavior. Parks & Recreation (Nov.): 16, 18-21.

Fox, D. 2004. Ecological reform school. Conservation in Practice 5(2): 38-39.

Heberlein, T.A. 1974. The three fixes: technological, cognitive, and structural. In Water and Community Development: Social and Economic Perspectives. Ann Arbor, MI: Ann Arbor Science.

Pryor, K. 1999. Reinforcement: Better than rewards. Pp. 1-10 in Don't Shoot the Dog! The New Art of Teaching and Training. New York: Bantam Books.

Nickerson. R.S. 2003. Changing Behavior. Ch. 5 in Psychology and Environmental Change. Mahwah, NJ: Lawrence Erlbaum Associates, Pub.

Meeker, J.W. 1992. Red, white, and black in the national parks. Pp. 195-205 in G. Machlis and D. Field, eds., On Interpretation: Sociology for Interpreters of Natural and Cultural History, revised edition. Corvallis, OR: Oregon State University Press.

Prettyman, B. 2004. Poaching patrol: Public is lending a hand in state's efforts to protect wildlife. Salt Lake City Tribune, March 25, pp. D1-2.

Dolittle, M.L., and G.D. Welch. 1974. Fire prevention in the deep South: Personal contact pays off. Journal of Forestry 72(8): 488-490.

Muth, R., and J.C. Hendee. 1980. Technology transfer and human behavior. Journal of Forestry 78:141-4.

Rogers, E.M., and F.F. Shoemaker. 1971. Water boiling in a Peruvian village: An example of an innovation that failed. Pp. 2-6 in E. Rogers, ed., Communication of Innovations. New York, NY: The Free Press.

Maiolo, J.R., J. Johnson, and D. Griffith. 1992. Applications of social science theory to fisheries management: Three examples. Society and Natural Resources 5:391-407.

Part III. Community Sustainability: Using Social Values in NR/E Management & Decision-making

Cornter, H.J. and M.A. Moote. 1999. Collaborative stewardship in action: Building a civic society. Ch.6 (pp. 91-108) in The Politics of Ecosystem Management, Washington, DC: Island Press.

Wellman, J.D. and T.J. Tipple. 1990. Public forestry and direct democracy. The Environmental Professional 12: 77-86.

Floyd, D.W. 1993. Managing rangeland resources conflicts. Rangelands 15(1): 27-30.

Moore, R.L., and K. Barthlow. 1997. Principles for minimizing trail conflicts: applications to mountain biking. Trends (3):11-14.

Rasmussen, G.A., and M.W. Brunson. 1996. Strategies to manage conflicts among multiple users. Weed Technology 10:447-450.

Lawrence, R.L., S.E. Daniels and G.H. Stankey. 1997. Procedural justice and public involvement in natural resource decision making. Society and Natural Resources 10:577-589.

Beierle, T.C. 1999. Using social goals to evaluate public participation in environmental decisions. Policy Studies Review 16(3/4): 75-103.

Walker, G.B. and S.E. Daniels. 1996. The Clinton Administration, the northwest forest conference, and managing conflict: When talk and structure collide. Society and Natural Resources 9:77-91.

National Collaborative Stewardship Team (NCST). 2000. Collaborative stewardship within the Forest Service: Findings and recommendations from the NCST, USDA Forest Service. Pp. 1-7.

Van de Wetering, S. 1996. Doing it the Moab way. Chronicle of Community 1(1): 5-16.

Selin, S.W., M.A. Schuett, and D.S. Carr. 1997. Has collaborative planning taken root in the national forests? Journal of Forestry 95(5): 25-28.

Blahna, D.J., and S. Yonts-Shepard. 1990. Preservation or use? confronting public issues in forest planning and decision making. Ch. 13 in J. Hutcheson, F. Noe and R. Snow (eds.) Outdoor Recreation Policy, Pleasure and Preservation. Westport, CT: Greenwood Press.

De Lacy, T. 1994. The Uluru/Kakadu modelBAṅangu Tjukurrpa: 50,000 years of aboriginal law and land management changing the concept of national parks in Australia. Soc. & Nat. Res. 7: 479-498.

Yaffee, S.L., and J.M. Wondolleck. 2000. Making collaboration work: Lessons from a comprehensive assessment of over 200 wide-ranging cases of collaboration in environmental management. Conservation Biology in Practice, pp. 17-25.

Bryan, H., 1996. The assessment of social impacts. Chap. 9 in Ewert W. (ed.) Natural Resource Management: The Human Dimension, Boulder, CO: Westview Press.

Burdge, R.J. 2003. The practice of social impact assessmentBbackground. Impact Assessment and Project Appraisal. 21(2): 84-88.