

Fall 2004
GEOG 461/561

ENVIRONMENTAL ALTERATIONS

MW 10:00-11:20 a.m., 360 Condon

Instructors: Stacy Rosenberg/Peter Walker

This course will examine human impacts on the natural environment at local, regional, and global scales. Class readings, discussions, practical exercises, and lectures will highlight historical and contemporary alterations to natural ecosystems. Emphasis will be placed on understanding the cultural, political, social, and economic processes that impact natural ecosystems and the challenges to changing existing practices. Case studies will provide in-depth analyses of complex human-environmental relationships and will portray concrete examples of current local, regional, and global efforts to implement sustainable practices. Special attention will be placed on community-based natural resource management, biodiversity issues, and common property resource management.

Course Outline

Part I: INTRODUCTION

9/27 Introduction

9/29 Human Impacts on the Environment

Vitousek et al. "Human Domination of Earth's Ecosystems"

Johnston et al. "Introduction to Part V (Geoenvironmental Change): A Burden Too Far?"

Meyer and Turner II "The Earth Transformed: Trends, Trajectories, and Patterns"

10/4 Biodiversity & the Sixth Major Extinction

Shiva "What Is Biodiversity and Why Is It Important?"

Jenkins "Prospects for Biodiversity"

Pimm et al. "Can We Defy Nature's End?"

10/6 Biodiversity and Human Values

Blaikie and Jeanrenaud "Biodiversity and Human Welfare"

Slater "Justice for Whom? Contemporary Images of Amazonia"

**Part II: BIODIVERSITY AND COMMUNITY-BASED NATURAL RESOURCE
MANAGEMENT**

10/11 Agroecosystems

Shiva "Having Our Cake and Eating It Too"

Shiva "The Future of Biodiversity"

10/13 Agroecosystems (continued)

Gorelick et al. "Facing the Farm Crisis"

Zarb "Small Holding Up"

Go to <http://www.monsanto.com> -- Click on the Science and Technology heading and read the Overview and the Agricultural Biotechnology page

10/18 National Parks and Protected Areas

Janzen “How to Grow a Wildland: The Gardenification of Nature”
Neumann “Land, Justice, and the Politics of Conservation in Tanzania”

10/20 Water Resources and Invasive Alien Species

Rosegrant et al. “Will the World Run Dry? Global Water and Food Security”
McNeely “Strangers in Our Midst: The Problem of Invasive Alien Species”

10/25 *Research Paper Proposal & Outline Due* -- Wildlife Management

Ghimire “Conservation and Social Development: An Assessment of Wolong and Other Panda Reserves in China”

Bodmer “Managing Wildlife with Local Communities in the Peruvian Amazon: The Case of the Reserva Comunal Tamshiyacu-Tahuayo”

10/27 Forest Ecosystems

Bryant “Romancing Colonial Forestry: The Discourse of ‘Forestry as Progress’ in British Burma”

Ribot “Rebellion, Representation, & Enfranchisement in the Forest Villages of Makacoulibantang, Eastern Senegal”

Part III: COMMON PROPERTY RESOURCE MANAGEMENT

11/1 “Tragedy of the Commons” and Common Property Regimes

Hardin “The Tragedy of the Commons”

McKean “Common Property: What Is It, What Is It Good for, and What Makes It Work?”
Burger and Gochfeld “The Tragedy of the Commons 30 Years Later”

11/3 Grassland Ecosystems

Wade “Common-Property Resource Management in South Indian Villages”

Curtin et al. “Transformations of the Chihuahuan Borderlands: Grazing, Fragmentation, and Biodiversity Conservation in Desert Grasslands”

11/8 Forest Management

Banana and Gombya-Ssembajjwe “Successful Forest Management: The Importance of Security of Tenure and Rule Enforcement in Ugandan Forests”

Varughese “Population and Forest Dynamics in the Hills of Nepal: Institutional Remedies by Rural Communities”

11/10 Guest Speaker, Dr. Greg Ringer -- Sustainable Community Tourism

Readings to be announced

11/15 *Research Paper, Part A Due* -- Coastal Ecosystems

Jackson et al. “Historical Overfishing and the Recent Collapse of Coastal Ecosystems”

Wilks “Prawns, Profit and Protein”

Christie et al. “The Challenges and Rewards of Community-Based Coastal Resources Management, San Salvador Island, Philippines”

11/17 Marine Fisheries

Acheson & Brewer “Changes in the Territorial System of the Maine Lobster Industry”
McCay “Community-Based & Cooperative Fisheries: Solutions to Fishermen’s Problems”
Dietz et al. “The Struggle to Govern the Commons”

Part IV: PROTECTING THE EARTH’S ECOSYSTEMS

11/22 Collaborative Conservation in the Pacific Northwest

Brick and Weber “Will Rain Follow the Plow? Unearthing a New Environmental Movement”
Collette “Oregon’s Plan for Salmon and Watersheds: The Basics of Building a Recovery Plan”
Coggins “Of Californicators, Quislings, and Crazyies: Some Perils of Devolved Collaboration”
Getches “Some Irreverent Questions about Watershed-Based Efforts”
Kenney “Are Community Watershed Groups Effective? Confronting the Thorny Issue of Measuring Success”

11/24 State Coercion

Peluso “Coercing Conservation? The Politics of State Resource Control”

11/29 Social Capital

Pretty “Social Capital and the Collective Management of Resources”
Bebbington “Social Capital and Rural Intensification: Local Organizations and Islands of Sustainability in the Rural Andes”

12/1 Sustainability & Community-Based Conservation

Berkes “Rethinking Community-Based Conservation”
Tickell “The Human Species: A Suicidal Success?”

Research Paper (Parts A & B) Due on Wednesday, December 8th at 10:15 a.m.

Contact Information

Office Hours: Stacy Rosenberg rosenbe@darkwing.uoregon.edu: Wednesdays 11:30 am - 1:30 pm, 246A Columbia or by appointment

Course Requirements for Undergraduate Students

Class Conduct: It is important that we create an atmosphere conducive to learning. Therefore, while I encourage debate and discussion, you should be respectful of others, and maintain a professional tone at all times. Language or action that is abusive or discriminatory will not be tolerated and is against University policies. Plagiarism, cheating, and other conduct contrary to University policies will not be tolerated.

Grading Criteria: The final grade will be based on the following: a 12-page paper (35%); group project (20%); quizzes (20%); attendance and participation (20%); reading summaries (5%).

Research Paper (35%): Students will complete a 12-page paper on an instructor-approved topic. The first portion (5%) is due October 25, and consists of a short project proposal and outline. Project sites outside the U.S. are encouraged, and at least 10 potential bibliographic sources are required. The second portion (Part A – 15%) is due November 15, and it is the first half of the research paper. Part A is a survey and analysis of the environmental alterations of a specific site and emphasizes

characteristics of the physical environment. The third portion (Part B – 15%) is due December 8, and it focuses on the social, political, cultural, and economic dimensions of the site-specific environmental alterations. The entire research paper is to be handed in on December 8.

Group Project (20%): Students will research a local environmental issue and present their findings to the class. Each project will include a discussion of the physical alterations (existent or potential) of a particular activity or project and will include the social, political, cultural, and economic dimensions involved in the project.

Quizzes (20%): There will be five pop quizzes. Each quiz will focus on course readings for that day.

Class Attendance and Participation (20%): Students are expected to attend all classes and read course materials prior to each class. Participation in class discussions and in-class exercises is a critical component of the course.

Reading Summaries (5%): Students will write five reading summaries during the term. Each summary will provide a synopsis of the readings for that day and the student's response to the readings. Students will be informed of each reading summary due date the class day prior to the due date.

Note: The group project and research paper will require a considerable amount of time to be spent outside of the classroom and will fulfill the 4th credit hour requirement for this course.

Course Requirements for Graduate Students

Graduate students will meet bi-weekly for one hour to further discuss class readings.

Class Conduct: It is important that we create an atmosphere conducive to learning. Therefore, while I encourage debate and discussion, you should be respectful of others, and maintain a professional tone at all times. Language or action that is abusive or discriminatory will not be tolerated and is against University policies. Plagiarism, cheating, and other conduct contrary to University policies will not be tolerated.

Grading Criteria: The final grade will be based on the following: a 20-page paper for graduate students (35%); class presentation (20%); quizzes (20%); attendance and participation (20%); reading summaries (5%).

Research Paper (35%): Students will complete a 20-page paper on an instructor-approved topic. The first portion (5%) is due October 25, and consists of a short project proposal and outline. Project sites outside the U.S. are encouraged, and at least 10 potential bibliographic sources are required. The second portion (Part A – 15%) is due November 15, and it is the first half of the research paper. Part A is a survey and analysis of the environmental alterations of a specific site and emphasizes characteristics of the physical environment. The third portion (Part B – 15%) is due December 8, and it focuses on the social, political, cultural, and economic dimensions of the site-specific environmental alterations. The entire research paper is to be handed in on December 8.

Class Presentation (20%): Students will co-facilitate one class during the term with another graduate student. The presentation will include an overview of the readings for that day and additional information on a related topic. Each presentation will include a discussion of the physical alterations

(existent or potential) of a particular activity or project and will include the social, political, cultural, and economic dimensions involved in the project.

Quizzes (20%): There will be five pop quizzes. Each quiz will focus on course readings for that day.

Class Attendance and Participation (20%): Students are expected to attend all classes and read course materials prior to each class. Participation in class discussions, in-class exercises, and bi-weekly meetings is a critical component of the course.

Note: Dr. Peter Walker will assign graduate student grades. Class facilitation and the research paper will fulfill the 4th credit hour requirement for this course.

Course Readings - A reserve packet is available at The Copy Shop (located on 13th) and on electronic reserve at Knight Library.

Part I: INTRODUCTION

Vitousek, Peter M., Harold A. Mooney, Jane Lubchenco, and Jerry M. Melillo. 1997. Human Domination of Earth's Ecosystems. *Science* 277:494-499.

Johnston, R. J., Peter J. Taylor, and Michael J. Watts. 2002. Introduction to Part V (Geoenvironmental Change): A Burden Too Far? In *Geographies of Global Change: Remapping the World*, 2d ed. Malden, MA: Blackwell.

Meyer, William B., and B. L. Turner II. 2002. The Earth Transformed: Trends, Trajectories, and Patterns. In *Geographies of Global Change: Remapping the World*, 2d ed., edited by R. J. Johnston, P. J. Taylor and M. J. Watts. Malden, MA: Blackwell.

Shiva, Vandana. 2000. Introduction: What Is Biodiversity and Why Is It Important? In *Tomorrow's Biodiversity*. New York: Thames and Hudson.

Jenkins, Martin. 2003. Prospects for Biodiversity. *Science* 302:1175-1177.

Pimm, Stuart L., Marcio Ayres, Andrew Balmford, George Branch, Katrina Brandon, Thomas Brooks, Rodrigo Bustamante, Robert Costanza, Richard Cowling, Lisa M. Curran, Andrew Dobson, Stephen Farber, Gustavo A.B. da Fonseca, Claude Gascon, Roger Kitching, Jeffrey McNeely, Thomas Lovejoy, Russell A. Mittermeier, Norman Myers, Jonathan A. Patz, Bradley Raffle, David Rapport, Peter Raven, Callum Roberts, Jon Paul Rodriguez, Anthony B. Rylands, Compton Tucker, Carl Safina, Cristian Samper, Melanie L. J. Stiassmy, Jatna Supriatna, Diana H. Wall, and David Wilcove. 2001. Can We Defy Nature's End? *Science* 293:2207-2208.

Blaikie, Piers, and Sally Jeanrenaud. 1997. Biodiversity and Human Welfare. In *Social Change and Conservation: Environmental Politics and Impacts of National Parks and Protected Areas*, edited by K. B. Ghimire and M. P. Pimbert. London: Earthscan Publications.

Slater, Candace. 2000. Justice for Whom? Contemporary Images of Amazonia. In *People, Plants, & Justice: The Politics of Nature Conservation*, edited by C. Zerner. New York: Columbia University Press.

Part II: BIODIVERSITY AND COMMUNITY-BASED NATURAL RESOURCE
MANAGEMENT

- Shiva, Vandana. 2000. Having Our Cake and Eating It Too. In *Tomorrow's Biodiversity*. New York: Thames and Hudson.
- Shiva, Vandana. 2000. The Future of Biodiversity. In *Tomorrow's Biodiversity*. New York: Thames and Hudson.
- Gorelick, Steven, Ross Hume, Michael Hart, Peter Rosset, Vandana Shiva, Paul Kingsnorth, and Sally Fallon. 2000. Facing the Farm Crisis. *The Ecologist: Special Supplement* 30 (4):27-42.
- Zarb, John. 2000/2001. Small Holding Up. *The Ecologist* 30 (9):40-44.
- Janzen, Daniel H. 1997. How to Grow a Wildland: The Gardenification of Nature. In *Nature and Human Society: The Quest for a Sustainable World*, edited by P. H. Raven. Washington, D.C.: National Academy Press.
- Neumann, Roderick P. 2000. Land, Justice, and the Politics of Conservation in Tanzania. In *People, Plants, and Justice: The Politics of Nature Conservation*, edited by C. Zerner. New York: Columbia University Press.
- Rosegrant, Mark W., Ximing Cai, and Sarah A. Cline. 2003. Will the World Run Dry?: Global Water and Food Security. *Environment* 45 (7):24-36.
- McNeely, Jeffrey A. 2004. Strangers in Our Midst: The Problem of Invasive Alien Species. *Environment* 46 (6):16-31.
- Ghimire, Krishna B. 1997. Conservation and Social Development: an Assessment of Wolong and other Panda Reserves in China. In *Social Change and Conservation: Environmental Politics and Impacts of National Parks and Protected Areas*, edited by K. B. Ghimire and M. P. Pimbert. London: Earthscan Publications.
- Bodmer, Richard E. 1994. Managing Wildlife with Local Communities in the Peruvian Amazon: The Case of the Reserva Comunal Tamshiyacu-Tahuayo. In *Natural Connections: Perspectives in Community-based Conservation*, edited by D. Western and R. M. Wright. Washington, D.C.: Island Press.
- Bryant, Raymond L. 1996. Romancing Colonial Forestry: The Discourse of 'Forestry as Progress' in British Burma. *The Geographical Journal* 162 (2):169-178.
- Ribot, Jesse C. 2000. Rebellion, Representation, and Enfranchisement in the Forest Villages of Makacoulibantang, Eastern Senegal. In *People, Plants, & Justice: The Politics of Nature Conservation*, edited by C. Zerner. New York: Columbia University Press.

Part III: COMMON PROPERTY RESOURCE MANAGEMENT

- Hardin, Garrett. 1968. The Tragedy of the Commons. *Science* 162:1243-1248.

- McKean, Margaret A. 2000. Common Property: What Is It, What Is It Good for, and What Makes It Work? In *People and Forests: Communities, Institutions, and Governance*, edited by C. C. Gibson, M. A. McKean and E. Ostrom. Cambridge: MIT Press.
- Burger, Joanna, and Michael Gochfeld. 1998. The Tragedy of the Commons 30 Years Later. *Environment* 40 (10):4-13; 26-27.
- Wade, Robert. 1992. Common-Property Resource Management in South Indian Villages. In *Making the Commons Work: Theory, Practice, and Policy*, edited by D. W. Bromley. San Francisco: Institute for Contemporary Studies.
- Curtin, Charles G., Nathan F. Sayre, and Benjamin D. Lane. 2002. Transformations of the Chihuahuan Borderlands: Grazing, Fragmentation, and Biodiversity Conservation in Desert Grasslands. *Environmental Science and Policy* 5:55-68.
- Banana, Abwoli Y., and William Gombya-Ssembajjwe. 2000. Successful Forest Management: The Importance of Security of Tenure and Rule Enforcement in Ugandan Forests. In *People and Forests: Communities, Institutions, and Governance*, edited by C. C. Gibson, M. A. McKean and E. Ostrom. Cambridge: MIT Press.
- Varughese, George. 2000. Population and Forest Dynamics in the Hills of Nepal: Institutional Remedies by Rural Communities. In *People and Forests: Communities, Institutions, and Governance*, edited by C. C. Gibson, M. A. McKean and E. Ostrom. Cambridge: MIT Press.
- Jackson et al. 2001. Historical Overfishing and the Recent Collapse of Coastal Ecosystems. *Science* 293:629-638.
- Wilks, Alex. 1995. Prawns, Profit and Protein: Aquaculture and Food Production. *The Ecologist* 25 (2/3):120-125.
- Christie, Patrick, Delma Buhat, Len R. Garces, and Alan T. White. 2003. The Challenges and Rewards of Community-Based Coastal Resources Management, San Salvador Island, Philippines. In *Contested Nature: Promoting International Biodiversity with Social Justice in the Twentieth-Century*, edited by S. R. Brechin, P. R. Wilshusen, C. L. Fortwangler and P. C. West. Albany: State University of New York Press.
- Acheson, James M., and Jennifer F. Brewer. 2003. Changes in the Territorial System of the Maine Lobster Industry. In *The Commons in the New Millennium: Challenges and Adaptation*, edited by N. Dolsak and E. Ostrom. Cambridge: The MIT Press.
- McCay, Bonnie J. 2001. Community-Based and Cooperative Fisheries: Solutions to Fishermen's Problems. In *Protecting the Commons: A Framework for Resource Management in the Americas*, edited by J. Burger, E. Ostrom, R. B. Norgaard, D. Policansky and B. D. Goldstein. Washington, D.C.: Island Press.
- Dietz, Thomas, Elinor Ostrom, and Paul C. Stern. 2003. The Struggle to Govern the Commons. *Science* 302:1907-1912.

Part IV: PROTECTING THE EARTH'S ECOSYSTEMS

- Brick, Philip, and Edward P. Weber. 2001. Will Rain Follow the Plow? Unearthing a New Environmental Movement. In *Across the Great Divide: Explorations in Collaborative Conservation and the American West*, edited by P. Brick, D. Snow and S. Van De Wetering. Washington, D.C.: Island Press.
- Collette, Carlotta. 2001. Oregon's Plan for Salmon and Watersheds: The Basics of Building a Recovery Plan. In *Across the Great Divide: Explorations in Collaborative Conservation and the American West*, edited by P. Brick, D. Snow and S. Van De Wetering. Washington, D.C.: Island Press.
- Coggins, George Cameron. 2001. Of Californicators, Quislings, and Crazies: Some Perils of Devolved Collaboration. In *Across the Great Divide: Explorations in Collaborative Conservation and the American West*, edited by P. Brick, D. Snow and S. Van De Wetering. Washington, D.C.: Island Press.
- Getches, David H. 2001. Some Irreverent Questions about Watershed-Based Efforts. In *Across the Great Divide: Explorations in Collaborative Conservation and the American West*, edited by P. Brick, D. Snow and S. Van De Wetering. Washington, D.C.: Island Press.
- Kenney, Douglas S. 2001. Are Community Watershed Groups Effective? Confronting the Thorny Issue of Measuring Success. In *Across the Great Divide: Explorations in Collaborative Conservation and the American West*, edited by P. Brick, D. Snow and S. Van De Wetering. Washington, D.C.: Island Press.
- Peluso, Nancy Lee. 1993. Coercing Conservation? The Politics of State Resource Control. *Global Environmental Change* 3 (2):199-217.
- Pretty, Jules. 2003. Social Capital and the Collective Management of Resources. *Science* 302:1912-1914.
- Bebbington, Anthony. 1997. Social Capital and Rural Intensification: Local Organizations and Islands of Sustainability in the Rural Andes. *The Geographic Journal* 163:189-197.
- Berkes, Fikret. 2004. Rethinking Community-Based Conservation. *Conservation Biology* 18 (3):621-630.
- Tickell, C. 1997. The Human Species: A Suicidal Success? In *The Human Impact Reader: Readings and Case Studies*, edited by A. Goudie. Oxford: Blackwell Publishers.