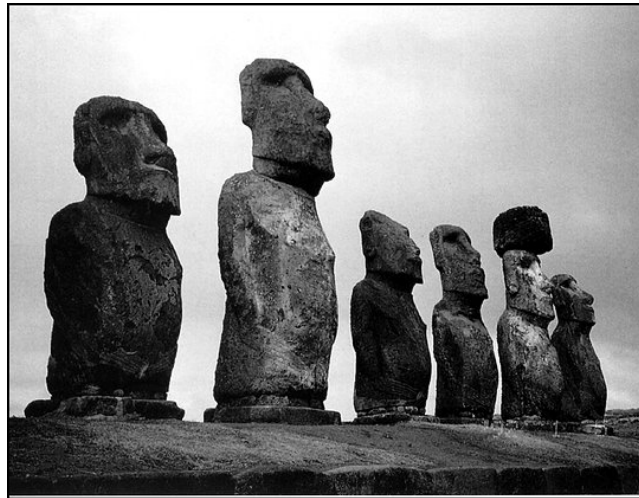


Natural Resources Planning

UAP 5414 Fall 2005 CRN: 94833

<p><u><i>Class times:</i></u></p> <p>Mon/Wens 1:25 – 2:15 PM Location: Architecture Annex 114 Office Hours: TBA and by appointment</p>	<p><u><i>Instructor information:</i></u></p> <p>Professor Bruce Goldstein brugo@vt.edu Office location: 106 Architecture Annex Office Tel: 231-7507</p>
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(Easter Island statues, produced by a society that exceeded its resource base and collapsed)

Course Description

In an era of globalization, dizzying human population growth, and unparalleled demand on the earth's natural resources, are our natural resource planning institutions capable of providing for the sustainable use of forests, aquatic systems, farms, fuels, the atmosphere, and oceans? How can natural resource planners provide for society's needs, while assisting society to come to terms with threats to its natural resource base and take the steps necessary to correct that slide? Is our institutional legacy a help or hindrance to ensuring the continued supply of natural resources and existence of healthy ecosystems?

This graduate seminar will consider these questions by first examining the latest incarnation of each of the major approaches to modern natural resource planning developed over the past half-century. Then we will consider some of more daunting issues of resource scarcity and conflict that threaten societal well-being and survival. We will conclude by taking up a handful of innovative approaches to natural resource planning proposed within the last decade, with an eye toward seeing whether they might help us to plan our way out of particularly knotty natural resource crises such as the disrupted fire regimes, biodiversity loss, climate change, the end of oil, freshwater and timber scarcity, declining fisheries, and the limits of soil fertility.

Readings Available at Bookstore / Copy Shop

Pyne, S. 2004. *Tending Fire: Coping with America's Wildland Fires*. Shearwater.

Diamond, J. 2004. *Collapse: How Societies Choose to Fail or Succeed*. Viking, New York.

Other readings will be available in a class reader to be available at A-1 copies the first week of the term, or will be made available on the blackboard website (www.learn.vt.edu).

Requirements and Grading

Weekly Posted Questions (20% of grade)

Students must come to class with a question that you have about each week's readings, bringing enough copies to hand one out to each student and the instructor. These questions should be thoughtfully related to the readings, not general or obvious. We will use these questions to orient in-class discussion or exercises. You should be prepared to explain your questions in greater detail in class. Questions *must* be presented at the beginning of class to receive credit. Two questions will be dropped in determining your grade.

Reading provocateur (20% of grade)

Each member of the seminar will take responsibility for introducing the class readings during 2 or 3 classes, depending on class size. For each reading, they will provide a brief (> 5min) summary, set the readings in broader historical and conceptual context, and provide some provocative comments to stimulate discussion.

In-class participation (20% of grade)

Informed participation is central to this class. Although subjective, students can earn participation credit by never missing class and being an informed, provocative, and considerate class participant. In short, be fully engaged or at least try to pretend and act as though this is the most exciting and enlightening seminar you have ever taken, and that you never want it to end.

Class will be proactive and conversational. Thus, *all* students must not only have read the reading assignment *prior* to class, but must be ready to discuss the readings on a regular basis. I am seeking input from the entire class, not just from a few committed students. Thus, students need to know when to speak up and when to stay quiet.

Students will purchase a reader at A-1 copies (in the university mall) containing all the articles to be read this term (books are available at university bookstore). Optionally, you can download all the articles from the blackboard website and assemble your own reader. You will be required to demonstrate that they have performed one or the other of these options by the third week of class. You will be awarded five class participation points for completing this task.

Group project (40% of grade)

Students will take responsibility for analyzing and writing a group report about the Nature Conservancy's Fire Learning Network, an innovative approach to natural resource planning. We will define the contours of this project collectively during the first month of class. Conducting this project will require arranging meetings outside of regular class time. At the end of this class, each class member will be required to hand in a one-page evaluation of their own contribution to the group project, to be completed before class. These evaluations will remain entirely confidential.

Disabilities and Special Needs

If there is anyone in the class who has special circumstances that require some revision or assistance in completing the assignments or to promote better learning, see the instructor to make these arrangements *early in the semester*. This applies to both those who are formally recognized by the university as having disabilities and those who are not. The intent is to ensure everyone an environment in which they can effectively learn.

For more detailed information on your rights please refer to:

<http://www.dos.vt.edu/SSD/default.html>

Weekly Schedule and Readings

The Basics

Introduction to Natural Resource Planning

M 8/22: Introduction

(No reading)

W 8/24: What is Natural Resource Planning?

- Chapter 1, Natural Resources: An Overview. Pp. 1-4. Holcheck, J.L. at al. 2003. Natural Resources: Ecology, Economics, and Policy. Prentice Hall, NJ.
- Randolph, J. 2003. “Environmental Land Use Planning and Management”, Washington D.C., Island Press. Chapter 1, pp. 3-6 and Chapter 2, Section on “The Role Of the Planner”
- Freudenberg, W. 2002. Navel Warfare? The Best of Minds, the Worst of Minds, and the Dangers of Misplaced Concreteness. Society and Natural Resources, 15:229-237.

Fundamentals of Natural Resource Planning

M 8/29: History of Natural Resource Planning (Adrinne)

- The Public Domain, in Abrams Natural Resource Policy
- Chapter 2: The Historical perspective. Pp. 23-62 in Holcheck, J.L. at al. 2003. Natural Resources: Ecology, Economics, and Policy. Prentice Hall, NJ.

W 8/31: Planning Traditions Within Natural Resource Planning

- Chapter 5, Planning, Policy and Administration, pp. 127-156 in Holcheck, J.L. at al. 2003. Natural Resources: Ecology, Economics, and Policy. Prentice Hall, NJ.
- Randolph, J. 2004. “Looking Back, Looking Forward”. Presentation at Association of Collegiate Schools of Planning Annual Meeting, Portland, OR.
- LaChapelle, P.R. et al. 2003. Barriers to Effective Natural Resource Planning in a “Messy” World. Society and Natural Resources, 16:473–490.

Themes and Approaches Within Natural Resource Planning

From the 1940’s onward: Rational-Comprehensive Natural Resource Planning

M 9/5: Natural Resource Planning as System Modeling (Alexa)

- Holmes, J. and Wolman, G. 2002. Early Development of Systems Analysis in Natural Resources Management from *Man and Nature* to the Miami Conservancy District. *Environmental Management* Vol. 27, No. 2, pp. 177–193
- Peterson, G.D., Cumming, G.S., and Carpenter, S.R. 2003. Scenario Planning: a Tool for Conservation in an Uncertain World. *Conservation Biology*, Pages 358–366, 17(2).
- Holling, C. S. 2004. From Complex regions to complex worlds. *Ecology and Society* 9(1): 11. [online] URL: <http://www.ecologyandsociety.org/vol9/iss1/art11>.

W 9/7: Social Impacts of Natural Resource Systems Modeling (Brian)

- Sarewitz, D. 2004 How Science Makes Environmental Controversies Worse. *Environmental Science & Policy* 7 (2004) 385–403
- Lovbrand, E. Oberg, G. 2005. Discussion of Sarewitz’s “How Science Makes Environmental Controversies Worse”. *Environmental Science & Policy* 8: 195–197
- Edwards, Peter N. Global comprehensive models in politics and policymaking. *Climatic Change*. 1996; 32(2):149-161.

From the 1950’s onward: Economic Analysis in Natural Resource Planning

M 9/12: Economic Analysis (Alexa)

- Chapter 4 “Conservation Economics”, pp. 104-126. In Holcheck, J.L. at al. 2003. *Natural Resources: Ecology, Economics, and Policy*. Prentice Hall, NJ.
- Hahn, R. 2000. The Impact of Economics on Environmental Policy. *Journal of Environmental Economics and Management* 39, 375-399.

W 9/14: The Use (and misuse?) of Economic Analysis

- Chapter on Cost-Benefit Analysis from Porter, T. M. 1995. *Trust in numbers: the pursuit of objectivity in science and public life*. Princeton: Princeton University Press.

From the 1960’s onward: Advocacy and Natural Resource Planning

M 9/19: Who Are These Advocates? (Adrienne)

(instructor will be out of town)

- Gerlach, L. 1999. *The Structure of Social Movements: Environmental Activism and Its Opponents*.
- Jasanoff, Sheila. 1997. *NGOs and the environment: from Knowledge to Action*. *Third World Quarterly*. 18(3):579-594.

W 9/21: What Influence Have These Advocates Had on Natural Resource Planning? (Ryan)

(instructor will be out of town)

- Burnett, M. and Davis, C. 2002. Getting out the cut: Politics and national forest timber harvests, 1960-1995. *Administration & Society*; May 2002; 34, 2;

- Bosworth, D. 2002. Striking the Right Balance: Coming to Terms with Change in National Forest Management. McClure Lecture, University of Idaho, Moscow, ID—September 18, 2002.
- Limerick, P.N. 2002 Forestry and Modern Environmentalism: Ending the Cold War. Journal of Forestry. Pp. 46-50. December.

From the 1970's onward: Participation in Natural Resource Planning

M 9/26: Natural Resource Planning and NEPA (Marcy)

- Council on Environmental Quality. 1997. The National Environmental Policy Act: a study of its effectiveness after 25 years. Executive Office of the President. Washington, D.C. 49 p.
- Fact sheet on NEPA “reauthorization” from Sierra Club

W 9/28: Recent Controversies Over Forest Service Planning and NEPA (Ryan)

- Hoberg, G. 2004. Science, Politics, and U.S. Forest Service Law: The Battle over the Forest Service Planning Rule Natural Resources Journal, 44(1).
- LeMaster, D.C. 2005. 2005 Final Rule and the Process Predicament. The Pinchot Institute.
- Neznok R. 2004. Focus on ... Forest Policy: Healthy Forests Initiative and Its Effect on Appeals. Journal of Forestry, March 2004, vol. 102, iss. 2, pp. 5-7(3).
- Coulombe M.J. 2004. Exercising the Right to Object: A Brief History of the Forest Service Appeals Process. Journal of Forestry, March 2004, vol. 102, iss. 2, pp. 10-13(4).
- Manring N. 2004. From Postdecisional Appeals to Predecisional Objections: Democratic Accountability in National Forest Planning. Journal of Forestry, March 2004, vol. 102, iss. 2, pp. 43-47(5).
- Anderson M.. 2004. Responses to Appeals, Litigation, and Forest Policy: Appeals Process Provides Multiple Benefits. Journal of Forestry, March 2004, vol. 102, iss. 2, pp. 48-49(2).
- (Appended to Anderson article in reader) Burley C.H. 2004. Responses to Appeals, Litigation, and Forest Policy: Appeals and Litigation: A View from Industry. Journal of Forestry, March 2004, vol. 102, iss. 2, pp. 49-50(2).

Totally Optional Readings:

- Environmental NGP/litigators WildLaw.2005. Review of the New NFMA Planning Regulations.
- Issue Description from “Science in Policy” (and environmental NGO concerned with misuse of science by Bush administration):
http://www.scienceinpolicy.org/cgi-bin/issues.py?title=national_forest_management_act_revisions
- Short issue description from American Lands, an environmental NGO:
http://www.americanlands.org/documents/1103737833_nfmafactsheet.pdf

- Comment on NFMA revisions from Society for Conservation Biology panel: <http://www.conbio.org/SCB/Activities/Sections/NAmerica/NationalForestPlanningAndManagement.pdf>
- Official Forest Service website on rule revisions: <http://www.fs.fed.us/emc/nfma/index.htm>
- Anderson, M. 2005 Forest Service Planning Directives. Internal Wilderness Society Memo.

From the 1980's onward: Community-based Natural Resource Planning

M 10/3: Planning at the Community Level (Vik)

- Brunner, R.D. 2002. Finding Common Ground.: Governance and Natural Resources in the American West. Chapter 1 Introduction (pp. 1-47) and Chapter 5 on the Quincy Library Group (pp. 159-200). Yale University Press, New Haven, CT.

W 10/5: Point and Counterpoint (Marcy)

- Bryan, T. 2004. Tragedy Averted: The Promise of Collaboration. *Society and Natural Resources*, 17:881–896.
- Peterson, M.L. 2005. Conservation and the Myth of Consensus. *Conservation Biology* 19(3) 762-767.

From the 1990's onward: Risk and Uncertainty in Natural Resource Planning

M 10/10: Fall Break, No Class

W 10/12: Risk, Uncertainty, and Wicked Problems in Natural Resource Planning

- Stewart et al. 2004. Managing Wicked Environmental Problems. Report to Jack Blackwell, Regional Forester, USDA Forest Service, Pacific Southwest Region. Pp. 1-85 (Chapters 1-4).

What Are the Natural Resource Challenges of the Twenty-first Century?

Organizational Challenges to Natural Resource Planning

M 10/17: Organizational Issues (Sonja)

- Ascher, W. 2001. Coping with Complexity and Organizational Interests in Natural Resource Management. *Ecosystems* (2001) 4: 742–757
- Samson, F.B. and Knopf, F.L. 2001. Archaic Agencies, Muddled Missions, and Conservation in the 21st Century. *BioScience Vol. 51 No. 10* • 869

W 10/19: Paved With the Best Intentions... (Robert)

- Singleton 2002. Collaborative Environmental Planning in the American West: The Good, the Bad, and the Ugly. *Environmental Politics* 11(3): 54-75.
- Owen 2002. Prescriptive Laws, Uncertain Science, and Political Stories: Forest Management in the Sierra Nevada. *Ecology Law Quarterly*. 29:747.

Institutional Challenges to Natural Resource Planning

M 10/24: Historical Institutional Legacies (Amos)

- Pyne, S. 2004. *Tending Fire: Coping with America's Wildland Fires*. Shearwater. First part of book

W 10/26: Present-day Challenges (Brian)

- Pyne, S. 2004. *Tending Fire: Coping with America's Wildland Fires*. Shearwater. Remainder of book.

NOTE CHRONO GAP Here – some stuff was re-assorted

Syllabus Changes: Natural Resources Planning

UAP 5141 Fall 2005 CRN: 94833

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Civilizational Challenges to Natural Resource Planning

M 11/7: Can Poor Natural Resources Planning Lead to the End of Civilization? (Vik)

- Diamond, J. 2004. Collapse: How Societies Choose to Fail or Succeed. Viking, New York.
 - Prologue (1-24)
 - Chapter 4: The Ancient ones (p. 136-156)

W 11/9: Civilization's End, Continued (Marcy)

- Diamond, J. 2004. Collapse: How Societies Choose to Fail or Succeed. Viking, New York. Selections.
 - Chapter 9: Opposite Paths to Success (p. 277-308)
 - Chapter 11: One Island Two Peoples (p. 329-357)

M 11/14 Civilization's End, Continued (Alexa)

- Diamond, J. 2004. Collapse: How Societies Choose to Fail or Succeed. Viking, New York. Selections.
 - Chapter 14: Why do some societies make disasterous decisions (p. 419-440)

W 11/16 Civilization's End, Continued (Ryan)

- Diamond, J. 2004. Collapse: How Societies Choose to Fail or Succeed. Viking, New York. Selections.
 - Chapter 16: The World as Polder (p. 486-525)

M 11/21: Thanksgiving Break

W 11/23: Thanksgiving Break

From the 2000's onward: Innovative Planning Models and Approaches

Adaptive Management and the Precautionary Principle

M 11/28: Precaution in the Planning of the National Forests of the Sierra Nevada (Derren)

- (Appears with remainder of report previously in reader on 10/12) Stewart et al. 2004 Managing Wicked Environmental Problems. Report to Jack Blackwell, Regional Forester, USDA Forest Service, Pacific Southwest Region. Pp. 86-111 (Chapter 5). Precautionary Principle.

W 11/30: Adaptation in the Planning of the National Forests of the Sierra Nevada (Amos)

- (Appears with remainder of report previously in reader on 10/12) Stewart et al. 2004 Managing Wicked Environmental Problems. Report to Jack Blackwell, Regional Forester, USDA Forest Service, Pacific Southwest Region. Pp. 112-151 (Chapter 6). Adaptive Management.

Co-management and Democratic Deliberation

M 12/5: Comanagement of Natural Resources (Adrienne)

- Dietz, T. et al. 2002. The Struggle to Govern the Commons. Science 302 (pp. 1907-1912.)
- Lane, M. 2001. Affirming New Directions in Planning Theory: Comanagement of Protected Areas. Society and Natural Resources, 14: 657-671.
- Armitage, D. 2005. Adaptive Capacity and Community-Based Natural Resource Management. Environmental Management 35(6) 703-715.

W 12/7: Deliberative Democracy and Natural Resource Planning (Brian)

- Making Choices Together: The Power of Public Deliberation, by David Mathews and Noelle McAfee. 2003. Kettering Foundation, Dayton, OH. Available online at: http://www.kettering.org/Foundation/Publications/Publication_List/MakingChoices2003.pdf
- Ch. 11: Collaborative Learning and the Public's Stewardship of Its Forests. Pp. 164-173 in Gastil, J. and Levine, P. 2005. The Deliberative Democracy Handbook: Strategies for Effective Civic Engagement in the 21st Century. Jossey-Bass, San Francisco.