Bio 530B
Conservation Policy

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Office hours: Mo 1-2; Tu 3-4 or by App't

Syllabus

Although an understanding of organisms, populations, communities and ecosystems, is necessary in any effort to protect biological diversity, such an understanding is not, in itself, sufficient to the task. Conservation requires popular endorsement, either by incentive or regulation. In other words, conservation is based in policy and politics. This course is intended as an introduction to the interface between conservation science and policy, which, it is hoped, will lead to a greater understanding of the challenges of conservation and the tools, techniques and processes available to professionals and citizens to conserve species and ecosystems, and inspire further exploration of the science-policy interface in conservation.

Course Objectives

The objectives of this course are to help students:

1. become familiar with fundamental principles of policy development
2. examine some key federal and NY State environmental and conservation policy and jurisprudence
3. considering a range of issues in conservation and how they are affected by policy

The course objectives will be accomplished by:

1. lectures by Biodiversity Program faculty and outside experts
2. extensive reading and discussion of the literature and current topics
3. development and presentation of a group project that deals with a specific conservation policy issue

Grades are determined by:

Midterm (33.3%)
Participation (33.3%)
    Describing papers
    Participating in discussion
Group project (33.3%) -- Due May 5

The Small Print

Attendance policy: If you miss a class you must show a doctor's note, death certificate or other documentation of valid absence; failure to provide such documentation will result in failure of the course

Ethical conduct: Violations of integrity, such as plagiarism, cheating, forgery or falsification will result in failure of the course and the matter will be reported to the Dean of Graduate Studies for further action. Please refer to the Graduate Bulletin for additional information.

Schedule of Lectures

Part 1. Conceptual Framework

January

25 Conservation Policy Drivers -- Ideals vs Interests

Readings: **Leopold, A.** 1947. The land ethic. A Sand County Almanac. **Madison, J. (Publius)** 1788. Federalist No. 51. Independent Journal. NY; **Vitousek** et al. 1997. Human domination of earth's ecosystems. Science 277:494-499

Discussion: Why did the American public lose interest in conservation and environmental policy?

February

1 Goods & Services – The Ecological Dimensions of Economics

Readings: **Costanza et al.** 1997.The value of ecosystem services and natural capital. Nature 387:253-260; **Costanza, R.** 2008. Stewardship for a "full" world. Current History 107: 30-35; **Gowdy et al.** 2010. What every conservation biologist should know about economic theory. ConBio 24:1440-1447; **Czech, B.** Economic growth, biodiversity and technological progress. ConBio 22: 1389-1398; **Lawn, P**. 2008. Macroeconomic policy & biodiversity conservation. ConBio 22: 1418-1423.

Discussion: After the global economic "crash" of 2008 is the neo-classical economic model rationale? Why do policy makers not consider alternatives?

8 The Policy Process H. Jarman

Readings and Discussion: **TBA**

Part 2. Environmental & Conservation Policies

14 Federal -- NEPA/ Endangered Species Act/USDA

Readings: **Congress**. 1787. The Constitution of the United States of America The National Environmental Policy Act (1969); The Endangered Species Act; **Hodges & Hagen** 2006. Law, Policy, Biology. ConBio 29; **Dwyer et al**. 1995. Property rights & ESA. ConBio 9; **Rohlf** .1991. Why ESA doesn't work. ConBio 5; **USDA** 2006. Conservation and the environment

Discussion: What determines whether a policy will work?

March

1 NY State and Local Policies – Is there life beyond zoning?

Readings: New York State Constitution (particularly Article 14); **US Congress**. 1926. Standard zoning enabling acts; **Kleppel, GS.** 2009. State of knowledge report on the environmental outcomes of alternative urban typologies and the land use policies that create them. Land Use-Coastal Ecosystem Study, NOAA, Charleston, SC

Discussion: What are the implications to conservation of a state constitutional convention

8 NY's State Environmental Quality Review Act — J. Mathews
Readings and Discussion: **TBA**
Distribute Midterm Exam

Part 3. Current Issues in Conservation Policy

15 Climate change and biodiversity — G. Robinson
Readings and Discussion: **TBA**
Midterm Due

22 Land use – Smart growth in a local control state
Readings: **Pendall, R**. 2003. Sprawl without growth. Brookings Institution, Washington, DC; NY State Smart Growth Public Infrastructure Policy Act; **Kleppel, GS et al**. 2006. Trends in land use policy and development in the coastal southeast, pp. 23-45. In, Kleppel et al. (eds.), Changing land use patterns in the coastal zone. Springer, NY; **Downs, A**. 2001. What does smart growth really mean. Foresight 8:1-5.
Discussion: Are there solutions?

29 The Paradox of Agriculture – Conservation or Conundrum?
Readings: **Daniels & Bowers** 1997. Holding our Ground. Island Press, Washington, DC (recommended, not required) **; Altieri, M.** 1999.The ecological role of biodiversity in agroecosystems. AgrEcosEnv74: 19-31; **Brussard et al.** 2007. Soil biodiversity for agricultural sustainability. AgrEcosEnv 121:233-244.; **Matson et al.** 1977. Agricultural intensification and ecosystem properties. Science 277: 504-509.
Discussion: What policies are needed to protect farming and the food supply in America?

April

5 Biological Invasions: Should Policies Aim for Exclusion or Damage Control?
Readings: **Mills et al.** 1996. Exotic species in the Hudson River Basin: A history of invasions and introductions. Estuaries 19:814-823; **Pimentel et al.** 2005. Update on the environmental and economic costs associated with alien-invasive species in the US. Ecological Economics 52: 273-288.
Discussion: Can we eradicate invasives? Can we control them? How?

12 Energy Policy and Biodiversity
Readings: **Heinberg**.2004. Power Down. New Society, Gabriola Island, BC, Canada; **Groom et al.** 2008. Biofuels & biodiversity: principles for creating better policies. ConBio 22: 602-609. **Richards et al.** 2006. Ag & forest C policy. Pew Center
Discussion: Is there an energy policy for the US?

26 Conservation: From Science to Policy — D. Higby/T.Tear
Readings and Discussion: **TBA**

May

5 Class Project Reports