

International Biodiversity Conservation

Spring semester module course, January-March 2006

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Course description

The UN-sponsored *Millennium Ecosystem Assessment* argues that the loss of ecosystem services will make it impossible to achieve the development goals of the world's poorest nations. In turn, the loss of ecosystem services is directly related to the loss of the Earth's diverse assemblage of genes, species and ecosystems—all of which are diminishing worldwide at a rapidly expanding rate. This course examines the causes and consequences of this loss of biological diversity and assesses how governments, civil society, and the private sector have responded to the problem at binational, multilateral, and global scales. By coming to an understanding of the origins and operations of ten specific multilateral environmental agreements and institutions, the class will explore the increasingly complex dynamics between these multiple actors and interests. A dominant theme running throughout the course will be the tension between “preservationist” ideals and “conservationist” approaches to the sustainable use of biological resources.

Course content

The first two introductory classes examine the concept of biodiversity, the causes of biodiversity loss, the valuation of biodiversity, and key concepts of conservation biology. The following 10 classes constitute the main body of the course, consisting of five “comparative case studies” (CCS) that contrast a pre-World War II institution with a post-WWII institution (with CCS-5 the one chronological exception). The five CCS's are:

- CCS-1: Marine mammal micromanagement
 - 1911 Fur Seal Convention
 - 1946 Whaling Convention
- CCS-2: From Point A to Point B, and back
 - 1916 Migratory Bird Treaty
 - 1979 Bonn Treaty
- CCS-3: Ecological imperialism—redux?
 - 1900 & 1902 European Wildlife Conventions
 - 1973 Convention on the International Trade of Endangered Species
- CCS 4: Going global, yet again
 - Early European efforts & 1940 Western Hemisphere Convention
 - 1948 World Conservation Union (IUCN) and 1992 Convention on Biological Diversity

CCS 5: From national parks to transborder bioregions

- “Peace Parks” in North America & Eastern Europe (1930s)
- International Sonoran Desert Alliance & Yellowstone to Yukon Conservation Initiative (early 1990s)

CCS 6: Bioprospecting

- 1984 International Undertaking on Plant Genetic Resources
- 1992 Convention on Biological Diversity

Based on the lessons learned in each CCS, the final two classes of the course focus directly on the issue of “conservation effectiveness,” with particular focus on assessing whether and how conservationists are “making a difference” in halting biodiversity loss.

Grading and evaluation

Classes will center around lectures, but discussion and questions will be encouraged. Students will write one short “creative policy” paper (500 words; 40% of grade) and one longer term paper (5000 words; 60% of grade). The short paper will require students to assimilate scientific and theoretical issues into a “real world,” policy-relevant context. Students will pick the topic of their term papers (<5000 words) subject to the two constraints that (1) the topic is framed as a policy relevant question, and (2) the topic is international in character. The course assumes no previous background in conservation biology or ecology.

Office hours

Immediately following class period and by appointment.

DHP P253 Course Outline

Introductory classes

January 18: Course overview & the meaning of biodiversity

- Millennium Ecosystem Assessment. 2005. Summary for decision-makers. *Ecosystems and Human Well-being: Biodiversity Synthesis*. <http://www.millenniumassessment.org/en/products.aspx>. Washington: World Resources Institute, 1-16.
- Jeffries, Mike J. 1997. Biodiversity and conservation. New York: Routledge. Chapter 1: "Biodiversity: From concept to crisis," 3-38.
- Takacs, David. 1996. *The Idea of Biodiversity: Philosophies of Paradise*. Baltimore: Johns Hopkins University Press. Chapter 2: "The making of biodiversity," 9-40.
- Stedman-Edwards, Pamela. 2000. A framework for analysing biodiversity loss. In *The root causes of biodiversity loss*, ed. Alexander Wood, Pamela Stedman-Edwards and Johanna Mang. London: Earthscan, 11-35.
- Lomborg, Bjorn. 2001. *The skeptical environmentalist: Measuring the real state of the world*. New York: Cambridge University Press. Chapter 23: "Biodiversity," 249-257.

January 23: Proximate & root causes of biodiversity loss

- Soulé, Michael and Reed Noss. 1998. Rewilding and Biodiversity: Complementary Goals for Continental Conservation. *Wild Earth*, 18-28. 8: no. 3. Available at: <http://www.rockies.ca/y2y/science/conservation/conbio/rewilding.asp>.
- Quammen, David. 1996. *The song of the dodo: Island biogeography in an age of extinctions*. New York: Scribner. Chapter VII: "The hedgehog of the Amazon," 451-498.

January 25: Biodiversity valuation

- Perlman, Dan L. and Glenn Adelson. 1997. *Biodiversity: Exploring values and priorities in conservation*. Malden, MA: Blackwell Science. Chapter 6, "Ambiguities," 102-124.
- Heal, Geoffrey M. 2000. *Nature and the marketplace: Capturing the value of ecosystem services*. Washington, D.C.: Island Press. Chapter 7, "Valuation," 111-131.
- Ehrenfeld, David. 1988. Why put a value on biodiversity? In *Biodiversity*, ed. Edward O. Wilson: 212-216. Washington: National Academy Press.

CCS-1: Marine mammal micromanagement

January 30: 1911 Fur Seal Convention & 1946 Whaling Convention

- Dorsey, Kurkpatrick. 1998. *The dawn of conservation diplomacy: U.S.-Canadian wildlife protection treaties in the progressive era*. Weyerhaeuser Environmental Books. Seattle: University of Washington Press. Chapter 1: "Introduction: The intersection of diplomacy and conservation," 3-18.
- Mirovitskaya, Natalia S., Margaret Clark, and Ronald G. Purver. 1993. North Pacific fur seal: Regime formation as a means of resolving conflict. In *Polar politics: Creating international environmental regimes*, ed. Oran R. Young and Gail Osherenko. Ithaca, New York: Cornell University Press.
- Mander, Linden A. 1941. *Foundations of modern world society*. Stanford University, California: Stanford University Press. Chapter 8: "Conservation of resources" (§ Seal fisheries), 387-390.
- Birnie, Pat W. 1989. International Legal Issues in the Management and Protection of the Whale: A Review of Four Decades of Experience International Law of Migratory Species. *Natural Resources Journal* 29, no. 4: 903-934.
- Aron, William, William Burke, and Milton Freeman. 1999. Flouting the convention. *Atlantic Monthly*, May 22-29.

CCS-2: Point A to Point B, and back over

February 1: 1916 Migratory Bird Treaty & 1979 Bonn Treaty **[Term paper topic due]**

- Hornaday, William Temple. 1931 [1970]. *Thirty years war for wild life*. New York: Arno. Chapter 28: “The birth of the Migratory Bird Treaty,” 161-166.
- De Klemm, Cyril. 1989. Migratory Species in International Law. *Natural Resources Journal* 29, no. 4: 935.
- Lenten, Bert. 2002. A Flying Start for the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA). *Journal of International Wildlife Law & Policy* 4, no. 2.
- Armstrong, Martha C., Richard H. Farinato, and Teresa M. Telecky. 2001. A wing and a prayer: Birds and their protection under law. *Journal of Avian Medicine and Surgery* 15, no. 4: 310-315.
- Commission for Environmental Cooperation of North America. 2003. *Final Factual Record for Submission SEM-99-002 (Migratory Birds)*. Montreal. 22 April. North American Environmental Law and Policy No. 11 (prepared in Accordance with Article 15 of the North American Agreement on Environmental Cooperation). http://www.cec.org/files/PDF/SEM/MigratoryBirds-FFR_en.pdf. “Executive summary,” 1-13.

CCS-3: Ecological imperialism—redux?

February 6: 1900 & 1902 European Wildlife Conventions & 1973 Convention on the International Trade of Endangered Species

- 1900 Convention for the Preservation of Wild Animals, Birds and Fish in Africa.
- 1902 International Convention for the Protection of Birds.
http://www.internationalwildlifelaw.org/bird_1902.html.
- Heijnsbergen, P. van. 1997. *International legal protection of wild fauna and flora*. Washington, DC: IOS Press. Chapter 2: “Historical survey” (§2.1-2.2), 9-17.
- Harland, David. 1994. Killing game: International law and the African elephant. London: Praeger. “Colonial law: Confusion of purpose,” pp. 66-70. Chapter 5: “Factors of Compliance: Conclusion,” pp. 59-60; Chapter 11: “The African elephant in international law,” pp. 167-175.
- Prendergast, D.K. and W.M. Adams. 2003. Colonial wildlife conservation and the origins of the Society for the Preservation of the Wild Fauna of the Empire (1903-1914). *Oryx* 37: 251-260.
- Curlier, Maaria and Steinar Andresen. 2002. International Trade in Endangered Species: The CITES Regime. In *Environmental regime effectiveness: Confronting theory with evidence*, ed. Edward L. Miles, Arild Underdal, Steinar Andresen, Jørgen Wettestad, Jon Birger Skjærseth and Elaine M. Carlin, 357-378. Cambridge, Massachusetts: MIT Press.
- Ginsberg, Joshua. 2002. CITES at 30, or 40. *Conservation Biology* 16, no. 5: 1184-1191.
- Sand, Peter H. 1997. Whither CITES? The Evolution of a Treaty Regime in the Borderland of Trade and Environment. *European Journal of International Law* 8, no. 1: 29.
- Stoett, Peter. 2002. The International Regulation of Trade in Wildlife: Institutional and Normative considerations. *International Environmental Agreements: Politics, Law and Economics* 2, no. 2: 193.

CCS-4: Going global, yet again

February 8: Early European efforts and the 1940 Western Hemisphere Convention & the 1948 IUPN/IUCN and the 1992 Convention on Biological Diversity

- Holdgate, Martin. 1999. *The Green Web*. London: Earthscan. Subsection of Chapter 1: “The movement goes international,” 9-13.
- Barkeley, Frederick R. 1941. Wild Life Protection: Pan-American nations band to work out a hemisphere conservation program. *New York Times*, 20 April, XX4.
- Glowka, Lyle, Françoise Burhenne-Guilmin, and Hugh Synge. 1994. *A Guide to the Convention on Biological Diversity*. Gland: IUCN - The World Conservation Union. Environmental Policy and Law Paper No. 30. Introduction (1-7).
- Schlickeisen, Rodger. 1992. Protecting the Earth's genetic library. *Washington Post*, May 24, C7.
- Hendricks, Brent. 1998. Transformative Possibilities: Reinventing the Convention on Biological Diversity. In *Protection of global biodiversity: Converging strategies*, ed. Lakshman D. Guruswamy and Jeffrey A. McNeely, 360-375. Durham, North Carolina: Duke University Press.

CCS-5: From national parks to transborder bioregions

February 13: “Peace Parks”

- U.S. Senate. 1932. Establishment of Waterton-Glacier International Peace Park. Calendar No. 494. 72nd Congress, 1st Session. Report No. 460.
- Goettel, Walery. 1964. Parks between countries. In *First World Conference on National Parks: Proceedings of a conference organized by the International Union for Conservation of Nature and Natural Resources (IUCN)*, ed. Alexander B. Adams. Washington, DC: National Park Service, U.S. Department of the Interior, 287-294.
- Westing, Arthur H. 1998. Establishment and management of transfrontier reserves for conflict prevention and confidence building. *Environmental Conservation* 25, no. 2: 91-94.
- Miles, John C. 1999. Cascades International Park: A case study. *Environments* 27, no. 3: 25-34.
- Zbicz, Dorothy C. 2001. Crossing international boundaries in park management—a survey of transboundary cooperation. In *Crossing Boundaries in Park Management: Proceedings of the 11th Conference on Research and Resource Management in Parks and on Public Lands*, ed. David Harmon: 197-203. Hancock, Michigan: George Wright Society.

February 15: The International Sonoran Desert Alliance and the Yellowstone to Yukon Conservation Initiative **[1st short paper due]**

- Williams, Florence. 1994. On the borderline. *High Country News*, March 21, 1+.
- Smith, Harold, Carlos Nagel, Luther Propst, and Wendy Laird. 1995. International Sonoran Desert Alliance. In *Biosphere reserves in action: Case studies of the American experience*, ed. Antoinette J. Condo and Sarah H. Bishop, 37-44. Washington, D.C.: U.S. National Committee for Man and the Biosphere. <http://www.state.gov/www/global/oes/case6.html>.
- Locke, Harvey. 1994. Preserving the wild heart of North America. *Borealis*, Spring 18-24: no. 15.
- Clark, Tim W. and David L. Gaillard. 2001. Organizing an effective partnership for the Yellowstone to Yukon Conservation Initiative. *Yale School of Forestry & Environmental Studies Bulletin* 105. <http://www.yale.edu/environment/publications/bulletin/105pdfs/105clarkgaillard.pdf>.
- Nelson, James Gordon, John C. Day, Lucy M. Sportza, Carlos Israel Vázquez, and James Loucky. 2003. Overview of protected areas and the regional planning imperative in North America. In *Protected areas and the regional planning imperative in North America: Integrating nature conservation and sustainable development*, ed. James Gordon Nelson, John C. Day, Lucy M. Sportza, Carlos Israel Vázquez and James Loucky: 1-21. Calgary: University of Calgary Press.

PRESIDENTS’ DAY FEBRUARY 20: NO CLASS

CCS-6: Bioprospecting

February 22: The “International Undertaking” and other macabre subjects

- 1983 International Undertaking on Plant Genetic Resources. Available at <ftp://ext-ftp.fao.org/ag/cgrfa/iu/iutextE.pdf>.
- Lesser, William. 1994. Institutional Mechanisms Supporting Trade in Genetic Materials: Issues under the Biodiversity Convention and GATT/TRIPs. Geneva: United Nations Environment Programme. UNEP Environment and Trade Series No. 4. Chapter 1: “Introduction,” 1-10.
- National Research Council. 1993. *Managing global genetic resources: Agricultural crop issues and policies*. Washington: National Academy Press. “An overview of genetic resources management,” 29-43.
- Pollan, Michael. 1994. The seed conspiracy. *New York Times Magazine* March 20, 49-50.
- Castree, Noel. 2003. Bioprospecting: From theory to practice (and back again). *Transactions of the Institute of British Geographers* 28: 35–55.

February 27: The Convention on Biological Diversity as a clash of mini-civilizations

- ten Kate, Kerry and Sarah A. Laird. 1999. *The Commercial Use of Biodiversity*. London: Earthscan. Chapter 1, pp. 1-12.
- Shiva, Vandana. 1997. *Biopiracy: The Plunder of Nature and Knowledge*. Boston: South End Press. Chapter 7, pp. 119-126.
- Posey, Darrell A. 1996. Protecting indigenous peoples' rights to biodiversity. *Environment*. 38: 8. October: 6.
- Janzen, Daniel. 1999. Gardenification of tropical conserved wildlands: Multitasking, multicropping, and multiusers. *Proceedings of the National Academy of Sciences* 96: 5987-5994.
- Schullery, Paul. 1997. *Searching for Yellowstone: Ecology and wonder in the last wilderness*. Boston: Houghton Mifflin. Introduction, pp. 1-5.

Concluding classes

March 1: Conservation effectiveness

- Kleiman, Devra G., Richard P. Reading, Brian J. Miller, Tim W. Clark, J. Michael Scott, John Robinson, Richard L. Wallace, Robert J. Cabin, and Fred Felleman. 2000. Improving the Evaluation of Conservation Programs. *Conservation Biology* 14, no. 2: 356-365.
- Kareiva, Peter and Michelle Marvier. 2003. Conserving biodiversity coldspots: recent calls to direct conservation funding to the world's biodiversity hotspots may be bad investment advice. *American Scientist*, July-August 344-351. 91: no. 4.
- van Schaik, Carel, John Terborgh, Lisa Davenport, and Madhu Rao. 2002. Making Parks Work: Past, Present, and Future. In *Making parks work: Strategies for preserving tropical nature*, ed. John Terborgh, Carel van Schaik, Lisa Davenport and Madhu Rao Terborgh, 468-481. Washington, DC: Island Press.
- Wilshusen, Peter R., Steven R. Brechin, Crystal L. Fortwangler, and Patrick C. West. 2002. Reinventing a Square Wheel: Critique of a Resurgent "Protection Paradigm" in International Biodiversity Conservation. *Society & Natural Resources* 15, no. 1: 17 - 40.

March 6: Final discussion and evaluations **[Term papers due]**

- Wilson, Edward Osborne. 2002. *The future of life*. New York: Alfred A. Knopf. Chapter 7, 149-189.