ENVIRONMENTAL CONSERVATION

Geography/EnvSt 339

FALL 2017

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Course Description. In this course we study environmental conservation from a geographical perspective reviewing the biophysical, institutional, and socioeconomic dimensions of environmental problems in order to develop more effective conservation solutions. Environmental conservation is itself a social process. Thus we pay careful attention to how changes in values, scientific understandings of nature, economy and politics affect conservation practice. Not only will we trace the major debates in environmental conservation but we'll also explore how differences in people's biophysical, economic and political surroundings have led to different perceptions of environmental problems and their solutions.

Through this class, you will develop an understanding of the major approaches to environmental conservation, their relative strengths and weaknesses, and how they developed historically. Case material will come from around the world with a historical overview of environmental conservation thought and action in the United States.

We will touch upon a range of environmental issues in this course including: e.g. toxic waste, air pollution, and water, but focus on two large and cross-cutting environmental challenges: biodiversity loss and climate change. Aspects of biodiversity protection will be covered in the U.S. context by first covering different ideas and understandings of the need to protect wilderness followed by one of the strongest rule-based conservation laws: the Endangered Species Act. Biodiversity conservation in all its forms (national parks to community-based approaches to payments) in a Global South context will be the focus of weeks 7-10. During this part of the course, we will conduct a role-playing exercise within discussion section based on community-based efforts in Tambopata, Peru. Climate change will be the second major focus with differential vulnerability and responsibilities covered in week 6 and various approaches to reduce GHG emissions and vulnerabilities (in WI and elsewhere) in weeks 11-14.

Learning Goals. By participating in this course, you will better understand:

1. The role of values, ecology, and institutions in shaping environmental threats and conservation response in a range of different contexts.
2. The history of conservation thought and action in the United States.
3. The major categories of federal land in U.S., their management and political controversies surrounding private use of these lands.
4. The factors contributing to the uneven distribution of environmental harms both globally and within the United States and how this is affected by race, class, and physical geography.
5. The strengths and weaknesses of major "rule-based" and "incentive-based" conservation programs and policies.
6. The ecological importance of biodiversity and opportunities for biodiversity conservation, particularly in the developing world.

7. The evolution of domestic and international policy to address climate change.
8. Challenges and prospects for a transition away from our economy's dependence on fossil fuels.

Learning Materials. Learning materials for this course include readings, on-line modules, and streaming videos. The required materials are assigned by week and unless otherwise stated, you should complete them prior to your discussion section meeting each week. All materials are available through the course's Canvas website (https://canvas.wisc.edu/courses/54910). Recommended materials are also listed for some weeks in case you wish to read further on a topic. We have developed on-line modules covering conservation issues related to climate change. These modules are accessible through the course webpage. Following each module, you are expected to take a short 5-question quiz to assess your learning (maximum time allocation: 10 minutes). You will be expected to complete the module (and associated quiz) by the lecture period to which the module is tied. You will use what you learned in these modules to do group-based problem solving during lecture periods. Videos are also used in this class; some during lecture and others as required viewing. These can be accessed through links from our course webpage. *Please note* that if you are viewing these on mobile devices, use a wireless connection to avoid significant data charges. Access to reserve videos is restricted to students in this course. Students may not copy, share, distribute or otherwise allow or facilitate any unauthorized access to the content or the passwords issued. Individuals who violate this provision will be subject to disciplinary action under the UW-Madison Misconduct Codes.

You will be tested on the material presented in lectures, videos, required readings and learning modules in exams.

Grading. Grades will be determined on the basis of a total of 300 points:

EXAMS: 150 points total for three exams held during the lecture period: Exam 1 on Oct 16, covering weeks 1-5; Exam 2 on Nov 20, covering weeks 6-10; and Exam 3 on Dec 13, covering weeks 11-14. Exams will consist of multiple-choice, T/F and short answer questions. Students must take the exams at the scheduled dates/times. Make-up exams can only be arranged if Prof. Naughton is notified in person in advance. *All make-up exams will be composed primarily of essay questions.*

ASSIGNMENTS & SECTION PARTICIPATION: 150 points. Discussion section activities are critical parts of this course. There will be one major assignment in section (Tambopata role play and paper) along with two smaller assignments. In addition, your attendance and active participation in discussion and lecture are important. *Your grade will depend partly on how much you enhance the learning experience of your fellow students in discussion section and in lecture.* Therefor attendance is **mandatory**. A syllabus for your discussion section will be provided at your first section meeting.

Letter Grade	Cumulative %
A	>92
AB	>88
B	>82
BC	>78
C	>69
D	>60
F	≤60

Letter grades for the course will be assigned based on the cumulative percentages of all work (e.g. out of 300 points) using a standard curve (see table above).

The distribution of cumulative scores varies from year to year and therefore in determining grades at the end of the semester, the cumulative score breaks between certain letter grades may be lower than those listed here (i.e. one may receive a higher letter grade than would be expected from the standard curve).

Graduate students: Graduate students who take this course will be assessed separately from other students in the course (exams and common work). In addition, extra work will be required. See Professor Naughton for details.

COURSE OUTLINE AND READINGS

Note: I may change a few of these readings but with no net increase in volume or difficulty and I will give you advance notice. When reading, focus on the author's main arguments and the evidence presented. Environmental issues are often controversial, so read critically. Readings are available at https://canvas.wisc.edu/courses/54910

REQ = Required materials, content included on exams.
REC = Recommended materials offering greater depth on topic but not included on exams.

Sep 6 – Course Introduction

WEEK ONE

Sep 11 – Population and Institutions

Sep 13 – European conquest and changing nature-society relations in North America

REQ: Cohen, J. 1998. "How many people can the earth support?" NY Review of Books 10/8/98
REQ: WRI. 2003. "Environmental governance. Whose voice? Whose choice?" In Decisions for the Earth pp. 1-12. WRI: Washington, D.C.
REQ: Worster, D. 1993. "The nature we have lost". pp 3-15 in The Wealth of Nature. NY: Oxford Press.

REC: Sabin, P. 2013. "Betting the future of the planet". pp 217-227 In The Bet: Paul Ehrlich, Julian Simon, and the Gamble over Earth's Future. New Haven, CT: Yale University Press.
REC: Guha, R. 2003. How much should a person consume? *Vikalpa 28(2): 1-11*.

WEEK TWO

Sep 18– Manifest destiny, environmental transformation, and the early roots of conservation thought, Guest: Peter Boger, PhD.

Sep 20 – Progressive Era conservation

REQ: VIDEO: The Wilderness Idea. 1992.
REQ: Thoreau, H.D. 1990. "The value of wildness". pp 36-39 In American Environmentalism: Readings in Conservation History. ed. R.F. Nash,. NY: McGraw-Hill.
REQ: Organ, J. et al. 2010. "Born in the Hands of Hunters" pp. 22-27 in The Wildlife Professional. Fall.
REQ: Anonymous. 2013. "In a dark wood" The Economist. Dec 21. 2 pp.

REC: Hays, S. P. 1990. "From conservation to environmentalism". pp 144-152 In American Environmentalism: Readings in Conservation History. Ed. R. F. Nash. NY: McGraw-Hill**.**

WEEK THREE

Sept 25 – Our public lands

Sep 27 – The 1970s and the dawn of the environmental movement. Focus: ESA.

REQ: Albrecht, V. S., & Christman, J. N. The Endangered Species Act. Retrieved from http://library.findlaw.com/1999/Jan/1/241467.html on August 15, 2011. (4 pages)

REQ: The Wildlife Society. 2006. *Final TWS Position Statement: The Endangered Species Act*. Bethesda, MD: The Wildlife Society. (3 pages)

REQ: DuHamel, J. 2010. Repeal the Endangered Species Act. Tucson Citizen. October 8, 2010. Retrieved from http://tucsoncitizen.com/wryheat/tag/esa/page/2/ on August 15, 2011. (3 pages)

REQ: Balmford, A. 2012. "Ending the Woodpecker Wars" Chap 3 from *Wild Hope*. U. Chicago Press

REC: Wilkinson, T. (2016). Yellowstone and beyond: Are the national parks being loved to death? *The Christian Science Monitor*. July 24, 2016

WEEK FOUR

Oct 2 Wolves in Wisconsin

Oct 4 The environmental justice movement

REQ: Bullard, R. 1994. "Environmental racism and the environmental justice movement". pp 254-265 In Merchant, C. Ed. Ecology. Atlantic Highlands, NJ: Humanities Press International.

REQ: Kay, J. & C. Katz. 2012. "Pollution, poverty, people of color: The factory on the hill". Environ. Health News, June 4, 2012. http://www.environmentalhealthnews.org/ehs/news/2012/pollution-poverty- and-people-of-color-richmond-day-1

REQ: Katz, C. and J. Kay 2012. 'We are Richmond.' A beleaguered community earns multicultural clout. Environmental Health News, June 5, 2012. http://www.environmentalhealthnews.org/ehs/news/2012/ pollution-poverty-and-people-of-color-richmond-day-2

REC: VIDEO. Laid to Waste: A Chester Neighborhood fights for its future. 1996 Produced by R. Bahar and G. McCollough.

WEEK FIVE

Oct 9 Urban environments in the Global South. Guests: Emmanuel Urey and Daniela W. Gray-Johnson

Oct 11 The Adventure Gap. Guest: James Mills

REQ VIDEO: Gapminder. 2008. *A Slum Insight.* https://www.youtube.com/watch?v=21v4HBNqjfw
REQ: 1 page handout with Kuznet curves from World Resources Institute 1996-7. Washington. D.C.
REQ: Mills, J. 2012. "Exploring the Adventure Gap" Wired Magazine.

REC: World Commission on Environment and Development. 2010. "Towards sustainable development". pp 207-217 In: Conca K and Dabelko GD (eds) Green Planet Blues, Westview Press, Boulder, CO.

WEEK SIX

Oct 16 – Exam 1 (Weeks 1-5)

Oct 18 Analyzing climate impacts in rich and poor countries

REQ: Online module. Climate justice: Climate impacts in developing countries

WEEK SEVEN

Oct 23 – Biodiversity conservation in the tropics

Oct 25 – People and parks, a view from Kibale National Park. Guest: Dr. David Tumusiime

REQ: Peres, C. 2005. Why we need megareserves in Amazonia. Cons Biology. 19: 728-733.
REQ: Vandermeer, J. & I. Perfecto. 2005. Chap 1-2 in Breakfast of Biodiversity. IFDP, Oakland, CA.
REQ: Western, D. and R. Wright. 1994. Background to Community-Based Conservation. pp. 1-14 in Natural Connections. Island Press: Washington, D.C.
REQ VIDEO: *Living with Elephants.* UW Madison Geography Dept. [6 min]

REC: Tilman, D. 2000. Causes, consequences and ethics of biodiversity. *Nature* 405:208-211.
REC: Kolbert, E. 2009The Sixth Extinction. *New Yorker*.

WEEK EIGHT

Oct 30 – From slash-and-burn to industrial agriculture - the quest for sustainability.

Nov 1 – Sustainable logging in tropical forests – Reforming institutions and norms.

REQ: Vandermeer, J. & I. Perfecto. 2005. Chap 3 in Breakfast of Biodiversity. IFDP, Oakland, CA.
REQ: The Economist. 2010. Aug 26th. "The Miracle of the Cerrado. Brazil has revolutionised its own farms". 7 pp. http://www.economist.com/node/16886442

REC: Sears, Robin R., and Miguel Pinedo-Vasquez. 2011. "Forest policy reform and the organization of logging in the Peruvian Amazonia." Development and Change 42.2: 609-631.

WEEK NINE

Nov 6 Is the Amazon like 'Avatar'? Indigenous rights and gold mining

Nov 8 Direct payments for conservation

REQ: Kayapó People's Manifesto June 2013. Downloaded 1/11/14 from http://raoni.com/news.php
REQ: Nepstad et al 2004 "Inhibition of Amazon deforestation and fire by parks and indigenous lands" Cons Bio. 20:66-73
REQ: Ferraro, P.J.& A. Kiss. 2002. "Direct payments for biodiversity conservation". Science 298:1718-1719

REC: VIDEO. Aljazeera news. 1/16/16. Gold at any cost: Illegal mining in Peru.

WEEK TEN

Nov 13 – Determining responsibilities for reducing greenhouse gas emission reductions

REQ: Online module. Debating greenhouse gas emission responsibilities
REQ: Online module. International climate mitigation history: Kyoto's fate

Nov 15 – Market-based approaches to climate mitigation

REQ: Online module. Flexibility mechanisms of Kyoto
REQ: Additional reading TBA.

WEEK ELEVEN

Nov 20 – Exam 2 (covers weeks 6-10)

Nov 22 – No Class – Happy Thanksgiving! (also, no discussion section this week)

WEEK TWELVE

Nov 27 — Climate change mitigation in the United States

REQ: Online module: Divergent National Energy Polices: the U.S. vs Germany

Nov 29 – The natural gas boom… an effective transition away from coal?

REQ: Levi, M. 2015. Fracking and the climate debate. *Democracy Journal* 37**.** http://democracyjournal.org/magazine/37/fracking-and-the-climate-debate/. Accessed 1/16/2016

REQ: Environmental Defense Fund. 2015. Aliso Canyon leak sheds light on national problem. Methane leaks occurring across our national gas supply chain take a huge climate toll. *https://www.edf.org/climate/aliso-canyon-leak-sheds-light-national-problem.* Accessed 1/16/2016

WEEK THIRTEEN

Dec 4 – Renewable energy technologies 101

REQ: Online module. Assessing alternatives to fossil fuels

Dec 6 – Choosing alternative energies for now and the future

REQ: Roberts, D. 2015. Here's what it would take for the U.S. to run on 100% renewable energy. Vox Explainers. http://www.vox.com/2015/6/9/8748081/us-100-percent-renewable-energy. Accessed 9/7/17

WEEK FOURTEEN

Dec 11 – Climate change adaptation: Planning for climate change in Wisconsin

REQ: Online module. Wisconsin climate impacts

Dec 13 – Exam 3 (Weeks 11-14)