



School of the Environment
UNIVERSITY OF TORONTO

ENV 1001H F

Environmental Decision-Making

Fall 2012

Classes: 10 AM to noon, Friday, Earth Sciences Building, Rm B142

Instructor: Professor David Pond (for a short biography, see http://www.utm.utoronto.ca/~w3pol/sessional_pond.htm)

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Grading:

Term Paper Proposal: 10%

Term Paper due: Dec. 7 (30%)

Short Papers: 5 each worth 4%=20%

Note: penalty for late essays is 2% per day including week-ends

Participation: 15% (including 5% attendance)

First Test (1 hr): Oct. 26 (10%)

Second Test (1 hr): Nov. 30 (15%)

What This Course Is About:

The course introduces the student of the environment to some of the basic problems and issues in environmental decision-making and public policy. Why do politicians fail to take effective action to reduce pollution and clean up the environment, even when the polls indicate this is what the public wants? What kind of environmental policies are likely to be successful, and what kind are likely to fail? Why do many environmental policies adopted by governments appear to be second-best solutions? These are the questions we will attempt to address.

This course is taught by a political scientist, but the course is designed to be accessible to students from a variety of academic backgrounds.

What Is Required Of You

This is a two-hour weekly seminar. Courses such as this one are not lecture courses, where the professor stands at the front of the class and lectures to a passive audience. In a seminar, students are expected to come to class prepared to engage actively in the class discussions of the assigned topics.

It follows that attendance, preparation and participation are crucial if you aspire to success in this course.

The following is a rough guide to how students' in-class participation will be marked:

GRADE	CLASS PARTICIPATION	THE READINGS
A	Comments show a strong understanding of the readings; asks insightful questions of guest speakers; does not interrupt other speakers or require undue attention	Shows a strong understanding of the readings, their relevance, and demonstrates an ability to offer reasoned critique
B	Shows a good understanding of the readings; professor may need to clarify some points s/he makes in class	Does all the readings and understands them with some sophistication; may have some gaps in understanding
C	Makes comments that offer a basic contribution to discussion, but sometimes not as thoughtful or sophisticated as those above	Does the readings and understands them at a basic level; may have notable gaps in understanding
D	Makes occasional comments that may sometimes be off-topic or demonstrate lack of familiarity with the readings	Does some reading and shows knowledge of some aspects of the material, but has significant gaps in understanding
F	Says very little; restates what the readings say; lacks familiarity with basic themes	Shows little familiarity with the readings; misunderstands basic aspects of the reading material

Reading:

There is no textbook you are required to purchase. Instead, the readings for this course are accessible through the Blackboard site.

Blackboard:

This course employs a Blackboard website (also known as the Portal), where you will find the course outline, course readings, and supplementary material. To access the ENV 320H website, go to <http://portal.utoronto.ca> and log in using your UTORid and password. If you need information on how to activate your UTORid and set your password for the first time, please go to www.utorid.utoronto.ca. Once you have logged in to the Portal, look for the My Courses box, where you will find the link to the ENV 320H website.

E-mail:

I welcome e-mail queries and comments. It is your responsibility to maintain your e-mail addresses in good working order and to ensure that the e-mail address known to the university (and listed on Blackboard) is accurate and functional. Failure to receive important class announcements and messages from me because of a faulty e-mail account (for example, an account which screens out my e-mails as junk mail; bounced messages because of overloaded caches) are not legitimate excuses.

Accessibility Needs:

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: <http://studentlife.utoronto.ca/accessibility>.

Writing Assignments:

The Term Paper

A list of possible term paper topics will be the subject of a separate hand-out. In the Proposal for Term Paper (10%) you will outline the hypothesis you wish to explore, and how you intend to research it. The purpose of this assignment is to help you avoid false starts and blind alleys in writing your major Term Paper. The Proposal should be no more than 2,000 words (excluding footnotes and bibliography).

There is no specific deadline for submitting the Proposal for Term Paper. You may submit your Proposal any week, up to the deadline for the Term Paper itself. However, it is in your interests to submit your Proposal as early as possible, to maximize the time you have available to incorporate my feedback on it into your Term Paper.

The major Term Paper (30%) should be no more than 5,000 words (excluding footnotes and bibliography). It is due at the end of term (Dec. 7).

These assignments will be explained in detail in a separate hand-out.

Short Papers

The short papers should be no longer than one page of text each. The subject-matter of the short papers is the week's class discussion and readings. Your five short papers should be submitted exactly one week after any of the following classes: Classes Two, Three, Four, Five, Six, Eight, Nine, Ten, and Eleven. You choose which five classes to write about.

In each of your short papers you address the following two themes:

- 1) *The most important thing I learned from the class discussion and/or readings was....*
- 2) *The thing I still don't understand is...*

The purpose of this exercise is to display your knowledge of the topics under discussion, and/or to raise questions which are unclear or not answered by the readings. Another purpose is to provide you with the opportunity to give me feedback on your progress and satisfaction with the course.

TurnItIn.com:

Normally, students will be required to submit their essays to TurnItIn.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the TurnItIn.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the TurnItIn.com service are described on the TurnItIn.com web site. A short guide on how to use TurnItIn.com is posted on the Blackboard site.

If a student does not wish to participate in TurnItIn, the student **MUST** advise me immediately, as you will be required to agree to alternate arrangements for vetting your work.

Plagiarism:

Plagiarism is cheating. It is considered a serious offence against intellectual honesty and intellectual property. Penalties for an undergraduate can be severe. At a minimum, a student is likely to receive a "0" mark for the assignment or test in question. But a further penalty is often assessed, such as a further reduction from the course mark or placing a permanent notation of the incident on an academic record.

It is essential that you understand what plagiarism is and that you do not commit it. In essence, it is the theft of the thoughts or words of others, without giving proper credit. You must put others'

words in quotation marks and cite your source(s). You must give citations when using others' ideas, even if those ideas are paraphrased in your own words. Plagiarism is unacceptable in a university.

The University of Toronto provides a process that faculty members must initiate when they suspect a case of plagiarism. This is described in the "Code of Behaviour on Academic Matters," available at <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>.

The following are some examples of plagiarism:

- Submitting as your own an assignment written by someone else.
- Quoting an author without indicating the source of the words.
- Using words, sentences, or paragraphs written by someone else and failing to place quotation marks around the material and reference the source and author. Using either quotation marks or reference alone is not sufficient. Both must be used!
- Adapting an author's ideas or theme and using it as your own without referencing the original source.
- Seeking assistance from a friend or family member in respect to work you claim as your own.

It is also unacceptable to hand in the same essay in two different courses in the same academic term.

If you are not sure whether you have committed plagiarism, it is better to ask a faculty member than risk discovery and be forced to accept an academic penalty.

As the passage above indicates, there are many forms of plagiarism. In my experience, the most common form of plagiarism is the failure to use quotation marks. So to repeat: all wording in your essays which is copied from another source must be in quotation marks.

It is important that you familiarize yourself with the University's policies and procedures. In addition to the "Code of Behaviour on Academic Matters," you can consult "Understanding Academic Integrity" at <http://www.utoronto.ca/academicintegrity/resourcesforstudents.html>; and the Academic Calendar's "Rules and Regulations" at http://www.artsandscience.utoronto.ca/ofr/calendar/Rules_&_Regulations.html. Also available on the Blackboard site is the University's "How Not To Plagiarize" guide.

Your essays will be marked on the assumption you have reviewed these documents.

You should also consult:

- "Advice on Academic Writing" (www.writing.utoronto.ca/advice); &
- The University's web page on plagiarism (<http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>).

Extensions on the Essay Deadlines:

Extensions will be granted for the essays only in cases of *documented* medical problems or of *documented* family emergencies.

If you need an extension you must ask me for it as soon as possible. I am very unlikely to grant a request long after the due date for the essay.

For a medical excuse I need an original medical note. The medical note should establish that the physician examined and diagnosed you at the time of your illness, not after the fact. If you submit a falsified or altered medical note you are liable to penalty.

You cannot get a medical excuse after an essay is due and you have already missed the due date.

For details about the process for applying for a medical extension, see the University's Health Services website, at <http://healthservice.utoronto.ca/main.htm>.

Missing a Test:

There is no provision for students to do extra work or assignments to make up for low grades on a test. You can certainly ask for an explanation about how your test was marked.

Students who miss a test because of *documented* medical problems or family emergencies *may* be entitled to write a makeup test.

Students should notify me as soon as possible that they will be missing a test. Do *not* wait for weeks after the test date before asking if it is possible to write a makeup test.

WEEKLY SCHEDULE:

Class One, Sept 14: Introduction to Course

The readings below provide background on the current state of environmental public policy in Canada. I don't expect that you will have them all read by Class Two! Nevertheless, these readings should help you prepare for our course.

Readings:

- Glen Toner, "Contesting the Green: Canadian Environmental Policy at the Turn of the Century," in *Environmental Politics and Policy in Industrialized Countries* (2001), pp. 71-120
- Stepan Wood, et al., "Whatever Happened to Canadian Environmental Law?," *37 Ecology Law Quarterly* (2010), pp. 981-1040
- Timothy Casey, "A Model Environmental Nation?: Canada as a Case Study for Informing US Environmental Policy," *41 American Review of Canadian Studies* (2011), pp. 345-357
- Michael Howlett & Sima Joshi-Koop, "Canadian Environmental Politics and Policy," in *Oxford Handbook of Canadian Politics* (2010)

Class Two, Sept 21: Basic Concepts in Environmental Decision-Making

In this class we will review some of the basic analytical concepts employed in the social science study of environmental decision-making. These concepts include: externalities, property rights, common-pool resources, the Tragedy of the Commons, and policy instruments.

Readings:

- David P. Baron & Thomas P. Lyon, "Environmental Governance," in *The Oxford Handbook of Business and the Natural Environment* (2011)
- Mark Winfield, "Policy Instruments in Canadian Environmental Policy," in *Canadian Environmental Policy and Politics* (2009), pp. 46-63
- Rose Anne Devlin & R. Quentin Grafton, eds., *Economic Rights and Environmental Wrongs: Property Rights for the Common Good*, chaps. 2 & 4
- Garret Hardin, "The Tragedy of the Commons," *162 Science* (13 Dec. 1968), pp. 1243-1248
- Ahmed Hussein, *Principles of Environmental Economics: Economics, Ecology and Public Policy*, pp. 95-100
- Daniel H. Cole, *Pollution and Property: Comparing Ownership Institutions for Environmental Protection*, chaps. 1 & 2 (excerpts)

Class Three, Sept 28: Wicked Problems & Post Normal Science

Many environmental issues are now being characterized as 'wicked' problems. A 'wicked' problem, in contrast to a 'tame' problem, is ill-defined, ambiguous, and controversial. The actors (in political science parlance, the 'policy community') cannot even agree on what the problem is. Wicked problems are dynamic – trying to solve one can induce the emergence of another one.

Not surprisingly, many scholars argue that the traditional intellectual tools of science and technology are no longer adequate for addressing our environmental problems. Instead, we have entered the world of 'post-normal' science. We need new methodologies for cases where the "facts are uncertain, values in dispute, stakes high and decisions urgent," in the words of Funtowicz and Ravetz.

Readings:

- Jon Naustdalslid, "Climate Change – the challenge of translating scientific knowledge into action," 18 *International Journal of Sustainable Development & World Ecology* (June 2011), pp. 243-252
- Daniel Sarewitz, "Liberating Science from Politics," 94 *American Scientist* (March-April 2006)
- Steve Rayner, *Wicked Problems: Clumsy Solutions – diagnoses and prescriptions for environmental ills* (Jack Beale Memorial Lecture on Global Environment, July 2006)
- John Turnpenny et al., "Noisy and definitely not normal: responding to wicked issues in the environment, energy and health," 12 *Environmental Science and Policy* (2009), pp. 347-358

Introduction to 'Post-Normal' Science:

- S. Funtowicz & J. Ravetz, "Post-Normal Science: Environmental Policy under Conditions of Complexity" (1999)
- Mike Hulme, "The Appliance of Science," *The Guardian*, 14 March 2007
- Sheila Jasanoff, "Skinning Scientific Cats," *New Statesman & Society* (26 Feb. 1993), pp. 29-31
- Post Normal Times (<http://www.postnormaltimes.net>)

Class Four, Oct 5: Climate Change

Climate change (or global warming) can be defined as the environmental issue of our time. The study of climate change from the social science perspective engages many of the concepts familiar to us in this course, such as tragedy of the commons, externalities, and the free rider problem. Alternatively, it can be analyzed as a classic 'wicked' problem.

Readings:

Canadian Background:

- National Roundtable on the Environment and Economy (NRTEE), *Reality Check: The State of Climate Progress in Canada* (June 2012)
- Environment Canada, *Canada's Emission Trends 2012* (August 2012)
- Pembina Institute, Commentary on *Canada's Emission Trends 2012*, at <http://www.pembina.org/blog/643>
- Kathryn Harrison, "The Road not Taken: Climate Change Policy in Canada and the United States," 7 *Global Environmental Politics* (November 2007), pp. 92-117
- Marc Jaccard, "The Climate Change Olympics: Perhaps some healthy provincial competition can get Canada moving," *Literary Review of Canada* (May 2010)

Analyzing the Problem:

- Lynda M. Warren, "Protecting the Global Commons," 16 *Forum for Applied Research and Public Policy* (Fall 2001), pp. 6-13
- *New York Review of Books*, "Dyson-Nordhaus Exchange" (June-September 2008)
- Gwyn Prins & Steve Rayner, "Time to Ditch Kyoto," *Nature* (25 Oct. 2007), pp. 973-975
- Gwyn Prins & Steve Rayner, *The Wrong Trousers: Radically Rethinking Climate Policy* (James Martin Institute for Science and Civilization, 2007)

Class Five, Oct 12: Fish

Modern Canada's greatest environmental disaster was the destruction of the Atlantic cod fishery. The tragedy of the commons (TOC) framework is highly influential in the diagnosis of this episode. What does the TOC framework tell us about the management of renewable, common-pool resources such as the oceans fishery?

Many advocates of the TOC paradigm argue that the solution is to introduce a property rights regime for protecting common-pool resources.

Can one accept the TOC framework for explaining the crisis, without endorsing the market advocates' proposed solutions?

Readings:

Background on the Atlantic Cod Fishery:

- Greenpeace, "Canadian Atlantic Fisheries Collapse" (<http://archive.greenpeace.org/comms/cbio/cancod.html>)
- Robert Kunzig, "Twilight of the Cod," 16 *Discover* (April 1995), pp. 44-58
- Industry Canada, "The History of the Northern Canada Cod Fishery" (1996) (<http://www.cdli.ca/cod/home1.htm>)
- Silver Donald Cameron, "Net Losses: The Sorry State of Our Atlantic Fishery," *Canadian Geographic* (April-May 1990), pp. 29-37

Analysis:

- Bonnie McKay & Alan Christopher Finlayson, "The Political Ecology of Crisis and Institutional Change: The Case of the Northern Cod" (Annual Meeting of the American Anthropological Association, Nov. 1995)
- David Ralph Matthews, "Commons versus open access: the collapse of Canada's East Coast Fishery," 25 *The Ecologist* (March 1995), pp. 86-97

Pro Market-based Analysis:

- Elizabeth Brubaker, "Unnatural Disaster: How Politics Destroyed Canada's Atlantic Groundfisheries," chapter 5 in Terry Anderson, ed., *Political Environmentalism* (Hoover Institution, 2000)
- Donald Leal, *Fencing the Fishery: A Primer on Ending the Race for Fish* (Atlantic Institute for Market Studies, Sept. 2005)

Qualified Support for the Market Paradigm:

- RQ Grafton et al., "Incentive-based approaches to sustainable fisheries," 63 *Can. J. Fish Aquat. Sci.* (2006), pp. 699-710
- Sharon Levy, "Catch Shares Management," 60 *BioScience* (Nov. 2010), pp. 780-785

Hostile:

- Daniel Bromley, "Abdicating Responsibility: The Deceits of Fisheries Policy," 34 *Fisheries* (2009), pp. 1-22

Class Six, Oct 19: Nuclear Waste Disposal

Not a single country in the democratic world reliant on nuclear power has been able to find a solution to the problem of storing high-level nuclear waste in permanently secure locations – a solution that is both technically sound *as well as* politically acceptable, despite decades of research and studies. Thus, the nuclear waste disposal problem raises important questions about the management of risk, democratic input into policy-making, and the role of the "expert" in government – and environmental justice.

Background: Atomic Energy of Canada Ltd. (AECL), the Crown corporation that developed the CANDU reactor, is proposing to bury the waste underground in the Canadian Shield. The Mulroney government appointed a panel (the Seaborn panel) to assess this proposal. In 1998, Seaborn concluded that while the concept of deep geological disposal might be technically feasible, it was unacceptable to the general public. The Chrétien government accepted Seaborn's recommendation to create an independent waste management agency (the Nuclear Waste Management Organization, or NWMO) to study the options.

However, contrary to Seaborn's recommendation, this new agency was not completely independent of the nuclear industry: its board of directors is composed of representatives of the three provincial nuclear Crown corporations. For this reason, the NWMO lacks credibility in the eyes of many critics of nuclear

power, who do not accept that the AECL's deep-storage concept can guarantee the safety of future generations. The NWMO reported to cabinet on a recommended waste option in November 2005.

In June 2007, the Harper government announced that it accepted NWMO's proposed waste burial option. In May 2010 the NWMO initiated its proposed site selection process. Municipalities around the country were invited to express an interest in becoming a host site for nuclear waste. To date, fifteen rural and small town communities in Saskatchewan and Ontario have done so. The expression of interest stage comes to an end on Sept 30. At the next stage, the NWMO subjects these potential sites to a multi-staged screening process. The completion of the site selection process is projected to take decades.

Readings:

Background:

- Nuclear Waste Management Organization (NWMO) (<http://www.nwmo.ca>)
- Natural Resources Canada (<http://www.nrcan.gc.ca/energy/sources/uranium-nuclear/nuclear-fuel-waste-Bureau/1619>)
- Maria Páez Victor, *Key Social Issues Related To Nuclear Waste, Or What Do Canadians Want To Do About Nuclear Waste?* (NWMO Background Paper, Nov. 2003)

Analysis:

- Anna Stanley, "Risk, Scale and Exclusion in Canadian Nuclear Fuel Waste Management," 4 *ACME: An International E-Journal for Critical Geographies* (2006), pp. 194-227
- Rolf Lidskog, "Siting conflicts – democratic perspectives and political implications," *Journal of Risk Research* vol. 8:3 (April 2005), pp. 187-206
- Peter Timmerman, *Ethics of High Level Nuclear Fuel Waste Disposal in Canada* (NWMO Background Paper, Sept. 2003)
- William Leiss, *The Risk-Based Approach to Long-Term Management of High-Level Nuclear Waste in Canada* (NWMO Background Paper, Nov. 2003)
- Genevieve Fuji Johnson, "The Limits of Deliberative Democracy and Empowerment: Elite Motivation in Three Canadian Cases," 44 *Canadian Journal of Political Science* (March 2011), pp. 137-159

Hostile ENGOs:

- Nuclear Waste Watch (<http://www.cnp.ca/nww/index.php>)
- Canadian Coalition for Nuclear Responsibility (<http://www.cnp.ca/nww/index.php>)
- Mark Winfield et al., *Nuclear Power in Canada: An Examination of Risks, Impacts and Sustainability* (Pembina Institute, Dec. 2006) (http://pubs.pembina.org/reports/Nuclear_web.pdf);
- Sierra Club of Canada (<http://www.sierraclub.ca/national/programs/atmosphere-energy/nuclear-free/index.shtml>)

Class Seven, Oct 26: Test in Class (1 hour)

Class Eight, Nov 2: Paradigms for Decision-Making

Back in the 1980s and 1990s, environmentalists argued that Sustainable Development (SD) should become the dominant policy-making paradigm in advanced capitalist countries such as Canada, supplanting the neo-liberal framework, which in turn had succeeded the post-WWII Keynesian framework. The Chrétien government bought into this campaign and created a SD Program within the federal government.

It can be argued that SD offers a general philosophical framework for thinking about specific environmental issues. It is often conceived as a process reform: a change in how we make decisions, as much as a change in what those decisions are.

An important issue in the debate over SD is how we think about the future. SD focuses us on our obligations to future generations.

But question: did SD work? Even sympathetic observers accept that SD has failed to become an influential discourse structuring decision-making in Ottawa.

The Ecological Footprint captured the public's imagination in the 1990s, and is still championed by many. The EF purports to provide us with information about the extent to which we are shortchanging future generations, in order to support our current consumption patterns.

Meanwhile Ecological Modernization appears to be the default paradigm which explains how environmental policy-making works in the capitalist democracies.

Readings:

Pro-Sustainable Development:

- James Meadowcroft, "Sustainable Development: a New(ish) Idea for a New Century?," 48 *Political Studies* (June 2000), pp. 370-387
- Robert Kates, et al., "What is Sustainable Development?," 47 *Environment Magazine* (April 2005), pp. 8-21

Critical of SD:

- Wilfred Beckerman, "The chimera of 'sustainable development'," 1 *Electronic Journal of Sustainable Development* (2007), pp. 17-26
- Steven Hayward, "A Sensible Environmentalism," *Public Interest* (Spring 2003), pp. 62-74

Ottawa's Failure to Implement SD:

- Ian Clark & Harry Swain, "Distinguishing the real from the surreal in management reform," 48 *Can. Public Admin.* (Winter 2005), pp. 453-476
- Glen Toner & James Meadowcroft, "The Struggle of the Canadian Federal Government to Institutionalize Sustainable Development," in *Canadian Environmental Policy and Politics* (2009), pp. 77-90
- Commissioner of the Environment and Sustainable Development, *Annual Report on Sustainable Development Strategies* (Dec. 2008)

The Ecological Footprint:

- Redefining Progress, *Ecological Footprint of Nations* (<http://www.ecologicalfootprint.org/>)
- World Wildlife Fund, *Living Planet Reports* (http://www.panda.org/news_facts/publications/living_planet_report/index.cfm)
- Global Footprint Network (<http://www.footprintnetwork.org>)

Critical of the Ecological Footprint:

- Stephen Bocking, "Put Your Foot in It," 30 *Alternatives* (Spring 2004), pp. 32-33
- James Heartfield, "Celebrating the 'human footprint'," *Spiked Online*, 26 April 2007
- Lawrence Solomon, "How Many Planets?," *Financial Post*, 19 June 2007
- Jennifer Franz Elissaios Papyrakis, "Online Calculators of Ecological Footprint: Do They Promote or Dissuade Sustainable Behaviour?," 19 *Sustainable Development* (2011), pp. 391-401
- G. Cornelius van Kooten & Erwin Bulte, "The Ecological Footprint: Useful Science or Politics?," 32 *Ecological Economics* (March 2000), pp. 385-389

Ecological Modernization:

- FH Buttel, "Ecological Modernization as Social Theory," 31 *Geoforum* (2000), pp. 57-65
- Anne Scheinberg, "The Proof of the Pudding: Urban Recycling in North America as a Process of Ecological Modernisation," 12 *Environmental Politics* (Winter 2003), pp. 49-75
- Dimitrios Konstadakopoulos, "The Limits of Ecological Modernisation in Canada's Atlantic Provinces," 20 *British Journal of Canadian Studies* (2007), pp. 187-210

Class Nine, Nov 9: Natural Capital Accounting/Ecosystem Services

Advocates of the natural capital concept/ecosystem services concept argue it provides a framework for integrating the environment into economic and government decision-making.

Readings:

- Robert Costanza et al., “The Value of the World’s Ecosystem Services and Natural Capital,” 387 *Nature* (15 May 1997), pp. 253-260
- National Round Table on the Environment and the Economy, *Securing Canada’s Natural Capital: A Vision for Nature Conservation in the 21st Century* (2003)
- Pembina Institute, *Natural Capital* (<http://www.pembina.org/economics/natural-capital>)
- David Suzuki Foundation, *Natural Capital* (<http://www.davidsuzuki.org/issues/wildlife-habitat/projects/natural-capital/what-is-natural-capital/>)
- Dieter Helm, “Sustainable Consumption, Climate Change and Future Generations,” 69 *Royal Institute of Philosophy Supplement* (2011), pp. 235-252
- Emma Marris, “Putting a Price on Nature,” 462 *Nature* (Nov. 2009), pp. 270-271
- Climate Connections (<http://climate-connections.org/2012/06/30/will-natural-capital-accounting-hasten-ecological-collapse/>) (watch the video about the World Bank)

Class Ten, Nov 16: Renewable Energy as a Case-Study in Decision-Making

Advocates of green or renewable energy argue that once all of the negative externalities of fossil fuels are explicitly calculated, renewable energy sources are fast becoming cost-competitive. But governments still have to get elected by voters more concerned about the upfront costs. Green energy cannot abolish the real-world politics of externalities.

Readings:

- Senate Committee on Energy, the Environment and Natural Resources, *Attention Canada! Preparing for our Energy Future Discussion Paper* (June 2010)
- Center for Energy at <http://www.centreforenergy.com>
- Vaclav Smil, “Global Energy: The Latest Infatuations,” 99 *American Scientist* (May-June 2011), pp. 212-219
- Ian Rowlands, “The Development of Renewable Electricity Policy in Ontario: The Influence of Ideas and Timing,” 23 *Review of Policy Research* (2007), pp. 185-207
- Stephen Hill & James Knott, “Too Close for Comfort: Social Controversies Surrounding Wind Farm Noise Setback Policies in Ontario,” *Renewable Energy Law & Policy Review* (2010), pp. 153-168
- Auditor General of Ontario, *Electricity Sector – Renewable Energy Initiatives* (Dec 2011)
- Vaclav Smil, “Moore’s Curse and the Great Energy Delusion,” *The American* (19 Nov 2008)

Class Eleven, Nov 23: Species at Risk as a Case-Study in Decision-Making

Are there non-utilitarian arguments in favour of protecting biodiversity, trumping the defence of property rights? If so, how should they be entrenched in law? What are the obstacles to effective protection of endangered species in Canada?

Readings:

The Problem:

- *Scientific American*, “What is the point of preserving endangered species that have no practical use?” (21 Oct. 1999)
- Anthony Barnosky, et al., “Has the Earth’s sixth mass extinction already arrived?,” 471 *Nature* (3 March 2011), pp. 51-57
- William Marsden, “Global warming: welcome to the age of mankind,” *The Montreal Gazette*, 22 Jan 2012
- Valentí Rull, “Sustainability, capitalism and evolution,” 12 *EMBO Reports* (2011), pp. 103-106

The Species at Risk Act (SARA):

- Mary Illical & Kathryn Harrison, “Protecting Endangered Species in the US and Canada: The Role of Negative Lesson Drawing,” 40 *Canadian Journal of Political Science* (2007), pp. 367-394
- Stewart Elgie, “The Politics of Extinction: The Birth of Canada’s Species At Risk Act,” in *Canadian Environmental Policy and Politics* (2009), pp. 197-215
- Arne Mooers, et al., “Science, Policy and Species at Risk in Canada,” 60 *BioScience* (Nov 2010), pp. 843-849

Class Twelve, Nov 30: Test in Class (1 hour)

Class Thirteen, Dec 7: Essay Due (no class)