

Global Environmental Justice
(PHIL 3712)

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Précis of the Course: This is an interdisciplinary course that applies concepts in ethical theory – such as sustainability as part of fairness to future generations, and intrinsic value in nature – to major environmental issues arising from aggregative human impacts on the biosphere. Drawing on several recent books packed with stunning information and written in a form accessible to all, we survey the largest-scale environmental problems that confront the whole world. We will focus on the scope and potential results of these problems, and the issues of justice that they raise. These problems include:

- deforestation, the resulting carbon release, drying of soil, and loss of animal species
- global warming, its multiple effects on climate, and the debate over its causes
- soil erosion, desertification, availability and productivity of arable land to feed growing numbers
- potential exhaustion of accessible fresh water sources needed for growing irrigation and industry
- pollution of lands, rivers, and oceans by excessive resource extraction and waste sinking
- exponential increases in energy usage, largely from fossil fuels, and renewable energy sources
- the effects of human population growth and per capita usage increases on all the above
- the lack of world-wide governing institutions that could regulate environmental externalities
- fair ways of holding nation-states responsible for preserving global environmental goods.

These problems are presented using information from ‘environmental accounting’ and other methods for assessing the global impact of human activities on the biosphere's overall capacity to produce and sustain life. To evaluate policy options in response, the course introduces several key concepts:

- collective action problems and related failures of markets to generate optimal outcomes;
- public goods of different scales, including *global public goods*, and their relation to substantive ethical values (such as intrinsic value in species and/or biodiversity);
- conservative management of an endowment so that it will continue to yield in perpetuity as a model of justice to future generations (and different capital bases as endowments).

This *endowment model* of the biosphere's ecosystem services (along with social goods functioning as common ‘capital’) helps clarify moral arguments behind ideals of "sustainable growth" and provides a rigorous way of understanding the ideal of ‘stewardship.’ Within this framework, we confront the problem of coordinating different nations to bear the near-term costs of global environmental goods among them -- especially given wealth disparities between the wealthy developed nations, ‘2nd-world’ developing nations like China, Brazil, and Indonesia, and the poorest developing nations.

At the beginning of the semester and at intervals throughout the course, students will also be introduced to a sample of different value-theories used to articulate environmental goods, and to standard moral theories for assessing policies in response to environmental goods (including the endowment model described above). However, while these ethical concepts provide an evaluative framework, this course does *not* focus in detail on theoretical issues in environmental ethics, such as questions about the ultimate ground of environmental values (in individual living beings, species,

sentient animals, ecosystems etc), how we can know them, and their relation to human life. These topics are investigated in detail in seminars on environmental ethics. Rather, this course is devoted to laying out the global environmental problems that make such theoretical questions important. Without an adequate understanding of the scale and nature of these problems, it is hard to appreciate the importance of philosophical work on environmental values and their role in theories of justice.

Prerequisites and Programs Served. This course presupposes no expert scientific knowledge nor philosophical background in theories of justice or environmental values. It is an *introductory and interdisciplinary* course that provides a sound basis for further study in environmental ethics, value theory, policy, law, economics, and sustainable business. However, students should complete their two required Philosophy courses before taking this course, so that they have a working knowledge of major ethical theories. I also recommend taking one social science core course and one natural science core course before enrolling in this course – you will get more out of it. This course counts towards the Environmental Policy major and minor *and* towards the Philosophy major and minor; it may be crosslisted by other programs, and it counts as a Global Studies core course. Given its case studies from around the world, this course will also be of interest to students in International Studies, International Political Economy, Political Science, Urban Studies, Economics, and others concerned to understand the full scope and nature of sustainability problems facing us in the 21st century.

The Global Justice theme. Because of the focus on global limits to environmental resource usage and its implications for sustainable development, this course involves more empirical data, science, geography, and economic information than most electives in Philosophy: it considers a wide range of issues, many of which are not widely, that affect the life-prospects of current peoples and future generations around the world. But each of these major problems also illustrates the same fundamental insight in political philosophy: collective action through law and common policy is essential to securing goods that cannot be attained by free markets alone. Students are asked to consider whether sustainability is such a public good.

If we accept that justice requires preserving at least some environmental goods that unchecked market forces will destroy, then given the global scale of the problems at hand, we must reconsider the entire structure of political governance on Earth. Students will consider and evaluate strong evidence that the most serious environmental problems we faced cannot be solved if public policy is based primarily on the economic interests of separate nation-states. But even given a will to make sacrifices to meet these problems, each nation (or group of nations) has strategic interests in free-riding on the sacrifices of other nations. Can such problems be solved by treaties from which nations can opt out, along with the efforts of NGOs? Or do they require a transfer of primary sovereignty to some kind of global government? And how could such a government with power to make binding transnational law be legitimate unless it were democratically elected by the world's citizens?

Texts: These texts are all required. The books are available in the bookstore and the course packet will be available through the instructor:

1. Lester Brown, *World on the Edge* (Norton, 2011) ISBN: 978-0-393-33949-9.
2. Walter Dodds, *Humanity's Footprint* (Columbia Univ Press, 2008), ISBN: 978-0-231-13967-0
3. Chris Martenson, *The Crash Course: The Unsustainable Future...* (Wiley Publishing, 2011) ISBN: 978-0470927649

4. Al Gore, *Our Choice: A Plan to Solve the Climate Crisis* (Rodale, 2009).
ISBN: 978-1594867347
5. Maggie Black and Jannet King, *The Atlas of Water* 2nd ed. (Univ California Press, 2009),
ISBN: 978-0-520-25934-8
6. Edward Wilson, *The Future of Life* (Vintage 2003): ISBN: 978-0679768111
7. Richard Pearson, *Driven to Extinction: The Impact of Climate Change on Biodiversity* (Sterling Publishing, 2011), ISBN: 978-0-4027-7223-8
8. James "Gus" Speth, *The Bridge at the Edge of the World* (Yale University Press, March 2008)
ISBN: 978-0-300-15115-2
9. *National Geographic* Nov. 2011 issue: Vol 220 No.5 (magazine complete *with map*)
10. There are several other assigned articles and excerpted book chapters available on the Eres page (on the library website) for this course – password = Davenport + 4-digit course number. There will also be numerous background articles to help with final paper topics, and an e-packet of documents on each major applied unit (derived mainly from popular media and online sources).

Requirements:

1 critical exposition essay (Feb)	19%
1 short response essay (March) <u>or</u> oral report	21%
1 take-home test on readings (early April)	23%
1 policy/position paper (late April)	25%
Class participation	12%

Class Participation: This grade depends mainly on two factors:

- The quality of your questions and contributions in class, including your answers in class to assigned study questions for the day. Be an *active* contributor, not just a passive listener, and you'll get more out of this material! Someone who never contributes the entire semester cannot score better than 50% on this component, which means losing 3% on your overall class score.
- There may also be a couple short in-class quizzes or exercises (no warning!).
- Your attendance. If you are absent more than two classes, you will lose points. Four absences is likely to lower you a whole grade. No illness is excused without a doctor's note. No absence is excused for flights or travel made during class days, or family events other than a wedding or funeral (proof required). You will be responsible for any readings covered in a missed session.

Take-Home Test: Your knowledge of the readings will be evaluated in one take-home test late in the semester (in lieu of final exam). It will consist of multiple choice questions along with some short-answer questions. Attending to class discussion will help a lot here, since test questions will emphasize the material we focus on during class.

- I may distribute some of the multiple choice questions for this test throughout the semester.
- You will have a choice among short answer and short essay questions on this test in April.

Essays: The two essays in the first half of the semester will focus on critical response and analysis of assigned readings. You will be able to choose among a list of assigned questions for each of these essays. For the final paper, each student selects and researches a topic I approve related to current environmental policies and problems; I will also suggest further readings on these topics beyond assigned course texts. *I must approve the topic and the main sources you will use; we should consult on this final paper.* These must include books and print articles, not only webpages.

Oral Report: In lieu of the second (midterm) essay, you may elect to give a 10 minute report to the class on one reading (assigned for the day when you report). Prepare a written report, roughly 2-3 pages double-spaced, explaining the material, evaluating it (why do you agree or disagree), and raising further questions to discuss with the class – hand in the written portion and field questions from the class.

- I encourage interested students to try this: don't be scared of speaking in class. We'll help you out if you stumble, and this isn't a test in public speaking; I will also chime in to supply suggestions where helpful. The key is to be organized and have thought through your questions on the reading.
- You may also make a powerpoint and/or handout for the class, which makes the speaking easier.

Other Policies

Attendance and typical excuses (sorry but I've had to get tough):

- No absence is excused for medical reasons without a real doctor's note.
- No absence is excused for work reasons (tell your employers when you have classes)
- Absence is excused for weddings and funerals only with some kind of proof.
- No absence is excused because of family vacations or airline tickets booked at bad times.

The family vacation in the Poconos, the Caribbean, or Maui is not an excused absence! If you have a real life crisis, talk to me in private; I am understanding. Please don't just vanish!

Computers and Papers: KEEP A BACKUP of everything you do on computers. That your laptop died or your flashdrive was lost is not an acceptable excuse: you should have another copy of all your work on another system. Also, you *must* keep a personal copy of any paper or take-home test submitted to me, just in case. Hardcopies are required – emailing assignments is not reliable.

Honesty and Citation: I take this very seriously; cheating is the one unforgivable sin. All your work for this class must be original, must be your own, and you must cite your sources, both when you quote text, and when you paraphrase. Examples of cheating:

- (1) Handing in work you did for another class without clearing it with me.
- (2) Copying another student's work on a test or paper, with or without their permission.
- (3) Handing in an essay downloaded from the internet, copied from an uncited website, or copied from an encyclopedia, book, or article without citation is plagiarism. This holds true even if the wording has been significantly changed. If in doubt, check with me in advance.

If I judge that a student has cheated in any of these ways, or in any comparably serious fashion, that student will fail the entire course and it will go on his/her permanent record here. If there are any prior offenses on record, suspension is possible. A minor infraction results in an F for the entire assignment, usually dropping your final grade by a whole letter.

Secondary Sources: You do not need many secondary sources beyond the primary readings, but there will be numerous relevant articles on my eres pages [in all cases, the password = Davenport + 4-digit course number]. If you want web sources on philosophical topics, use the new *Routledge Encyclopedia of Philosophy* on the library "Databases" pages, or the *Stanford Encyclopedia of Philosophy* online. Never depend on the Microsoft Encarta Encyclopedia, which is very unreliable.

If you bring in ideas and quotes from secondary sources, but you must cite them either by footnotes or parenthetical references referring to a Works Cited section at the end of the paper.

- This includes paraphrases: even if you reword what the author said, cite the page number.
- It also includes websites: give the full URL of the page you cite. NB: your final paper project may refer to some webpages, but it should also refer to relevant print articles and book chapters.

Reading and Assignment Schedule

Jan.15 - 18: Introduction: Environmental Values and Sustainability

- (1) Syllabus and review of course themes.
- (2) Anthropocentric, ecocentric, and biocentric approaches to environmental values (overview).
- (3) Louis Pojman's Introduction to *Global Environmental Ethics* (handout)
- (4) Stuart Pimm, *A Scientist Audits the Earth*, ch.5, pp, 77-80: Easter Island story (handout)
 - The concepts of “carrying capacity” and “sustainable yield;”
 - Also see Pimm, *A Scientist Audits the Earth*, Intro & Ch.1 (eres) on method of yield estimation.
- (5) Todd Sandler, *Global Challenges*, chs. 1-2 on public goods and game theory (course packet).
 - The environmental capital endowment model and sustainability as principle of basic justice.

Jan.22-25: Game Theory and Global Public Goods: an outline

- (1) Sandler chs. 1-2 continued: Prisoner's Dilemma, Assurance/Stag Hunt, Chicken games
- (2) Walter Dodds, *Humanity's Footprint*, ch.5 on the “tragedy of the commons” & game theory
- (3) Speth, *Bridge at the Edge of the World*, Intro & ch.1 on global environmental problems (eres).
 - An expansive definition of public goods not providable in a stable way by markets alone.
 - Questions about governance and collective action problems (course handouts).

Jan. 29 - Feb.1: Free Market Capitalism, Environmental Externalities, and Justice

- (1) James Speth, *Bridge at the Edge of the World*, ch.1 continued, ch2 (eres).
 - Pollution problems, free riders, ‘tragedies of the commons,’ and regulatory challenges
 - see course handout on Perverse Subsidies
- (2) Clive Ponting, *A New Green History of the World*, ch.15: “Polluting the World” (eres)
- (3) Chris Martenson, *The Crash Course*, chs.1-6, pp.3-40: the end of traditional growth-drivers.

Feb.5-8: Justice to Future Generations, the ‘Sustainable Principle,’ and Natural Value

- (1) DesJardins, *Environmental Ethics*, ch. 4: Responsibilities to Future Generations (eres)
Discussion: Rousseau and Locke on original ownership of lands (course handouts).
- (2) Mary Williams, “Discounting vs Maximum Sustainable Yield” in Sikora and Barry, eds., *Obligations to Future Generations* (eres).
Discussion: Environmental Capital compared to other forms of Common Capital bases.
- (3) Holmes Rolston III, “Duties to Endangered Species,” from Sterba, *Earth Ethics* (eres).
 – [time-permitting, this reading introduces the topic of intrinsic value in nature].

Feb.12-15: Earth's Environmental 'Endowment' & Yield Usage overviews – Happy Valentines

- (1) Pimm, *A Scientist Audits the Earth*, chs.2 & 6 (eres) on overall human impacts on land.
- (2) Edward Wilson, *The Future of Life*, chapters 2 and 4: total human footprint.
Discussion: components of 'footprint' (direct use, carbon use, waste sinks, minerals, etc).
- (3) Begin Walter Dodds, *Humanity's Footprint* chs.1-2 on our unsustainable resource uses.
 - see course packet section on Population, Food Crops, Footprint and Sustainability
 - presentation to compare Pimm's figure of 42% land resource usage to Wilson's and Dodd's.

- (4) Short response papers will be due Tuesday Feb.15
Feb.19: After Presidents' Day Monday (Feb.18), classes follow a Monday schedule on Tuesday.

Feb.22: Projections of Overall Human 'Footprint:' Comparison of Different Scenarios

- (1) Dodds, *Humanity's Footprint* chs.1-2 continued: unsustainable trajectories.
– see e-packet on Population, Food Crops, Footprint and Sustainability
– see online sources: Millenium Ecosystem report; Geo5 Aseessment, World Wildlife etc.
- (2) Presentation to compare Pimm's figure of 42% land resource usage to Wilson's and Dodds'
- (3) Martenson, *Crash Course*, chs. 19-20 on minerals and soils.

Feb. 26 - March 1: Stress on Soils, Waters, Arable Lands

- (1) Lester Brown, *World on the Edge*, chs.1-5 (pp.3-71).
Discussion: Comparison of Speth's and Brown's analyses
- (2) Al Gore, *Our Choice*, ch.10 on Soil.
- (3) Lester Brown, *Full Planet, Empty Plates*, ch.7: "Grain Yields Starting to Plateau" (eres)
- (4) Kugelman and Levinstein, *Global Farms Race*, Introduction (eres)
- (5) Recommended: Pimm, *A Scientist Audits the Earth*, ch.5 on land usage & desertification (eres).

March 5 - 8: Deforestation and Biodiversity Loss

- (1) Pimm, *A Scientist Audits the Earth*, ch.4 on forests (eres).
- (2) Wilson, *The Future of Life*, ch.3 on rainforest biodiversity.
- (3) Presentation on deforestation: Haiti, Madagascar, Brazil and the Amazon in general.
– see e-packet Tropical Forest Loss and course handout on Pimm & Tropical Forests
- (4) Start Richard Pearson, *Driven to Extinction*, chs. 1-3 on climate and biodiversity hotspots.
- (5) Recommended: Wilson, *The Future of Life*, ch.5 on value of the biosphere.
- (6) *Short essay will be due* on March 12 (for those not doing an oral report).

March 11 -15: Spring Break (enjoy!) (+ Daylight savings time)

March 19 -22: Deforestation and Conflict in Africa; Other Impacts on Land & Freshwater

- (1) Complete Pearson, *Driven to Extinction*, ch.3 on biodiversity.
- (1) "Rift in Paradise: Africa's Albertine Rift," in *National Geographic* Nov. 2011: 82-117 (and *fold-out map*): Congo region.
- (2) Al Gore, *Our Choice*, ch.9 on forests: Indonesia and southeast Asian rainforest loss.
- (3) Begin Dodds, *Humanity's Footprint*, chs. 3-4 on ozone, fertilizers, freshwaters and seas (pp.48-82; skim thru opening section of ch.3 on global warming).

March 26: Toxins from Industry & Farming, Irrigation, Dams, and Freshwater in general

- (1) Dodds, *Humanity's Footprint*, ch.4 continued.
- (2) Maggie Black and Jannett King, *The Atlas of Water, 2nd ed.*: Introduction, Part I, Part II chs 6-9, Part III chs. 12-17, Part IV chs. 19-22. Part V chs.25-28.
– see e-packet on Fresh Water and Oceans

March 29: Easter break, no class.

April 2 - 5 : Fisheries and Threats to Ocean Ecosystems

- (1) Martenson, *Crash Course*, chs.21-22 on freshwater and fisheries.

- (2) Pearson, *Driven to Extinction*, ch.5 on corals and sea life.
- (3) Recommended: *The Empty Ocean*, ch.2 (eres)
- (4) Discussion: harms caused by the plastic mountain in accumulating in the middle of the Pacific.
– see course packet section on Pollution and Plastics

April 9 - 12: Sustainable Economic Growth?

- (1) Speth, *Bridge at the Edge of the World*, chs. 4-6 on transformed economic expectations, alternatives to GDP, and better measures of happiness.
– see course handout on GPI
- (2) Discussion: How can fairness to the developing world be reconciled with sustainability? Is a grass-roots change in demand enough, or do we need global governance for coordinated law?
- (3) Martenson, *Crash Course*, chs.23-25: foreseeing the end of traditional economic growth.

April 16 - 19: The Debate about Causes and Effects of Global Warming

- (1) Al Gore, *Inconvenient Truth* – pages from introductory chs. on eres (for class presentation);
– see course handouts on The Global Warming Debate
- (2) Dodds, *Humanity's Footprint*, ch.3 section on global warming; compare Speth ch.1 sections.
- (3) Al Gore, *Our Choice*, Introduction and ch.1;
- (4) E-packet section Global Warming and Carbon Cycle (and more articles on eres)
- (5) Recommended: G.T. Miller, "Global Warming: How Serious is the Threat?" in Sterba (eres);

Sunday April 21: Happy Earth Day.

April 23 - 26: Alternative Energies and Plans for Global Sustainability

- (1) Gore on alternative energies: *Our Choice* chs. 2-8 (and chs, 12-13 time-permitting).
- (2) Martenson, *Crash Course*, chs.15-18 on energy, the economy, and limits to technofixes.
- (3) Lester Brown, *World on the Edge*, section III intro and chs. 8-11 – “Plan B” proposals.

April 30: Alternative Energies, Innovations for Food and Water, Climate and Biodiversity

- (1) Brown’s “Plan B” solutions continued: ch.12 (time-permitting)
- (2) Pearson, *Driven to Extinction*, chs. 8-10 (esp. 8 & 10) on positive steps for conservation.
- (3) Presentation on green energy, proposed 'technofixes' for various environmental problems.
- (4) Recommended: Wilson, *Future of Life*, ch.7 on proposed solutions.

May 3: Innovations and Techno-Fixes [Final class in lieu of exam]

- (1) Overflow
- (2) *Final papers* will be due May 8 for graduating seniors, May 10 for everyone else.
Hardcopy required, in my box in Collins Hall !

[Professor will be in Denmark from May 4 - 8, may have limited email access during that time].

Environmental Ethics Overview

1. Intrinsic Value

- Are human persons the only beings with intrinsic value? – the “anthropocentric” approach
Or could intrinsic value or moral standing also be found in
- conscious animals – standard “animal rights” view
 - unconscious animals, plants, landforms, ecosystems – the “ecocentric” position
 - individual species and biodiversity of species in total – the “biocentric” position

2. Utilitarian and Nonutilitarian approaches

If the natural environment and its species have intrinsic value, should this be reflected in our thinking according to cost-benefit analysis along with other benefits and harms to human welfare (seeking to maximize total value over the long run), or reflected by other “non-consequentialist” ethical principles that define right acts and policies as more than a function of good outcomes?

Related global environmental problems:

- (1) treatment of animals in factory farming, the ethics of meat-eating and animal research;
- (2) the loss of rainforests and other rich habitats; loss of human access to wilderness;
- (3) land pollution and damage to watersheds from farming chemicals, logging, mining;
- (4) damage to the ocean ecosystems and fisheries

3. Duties to future human persons and sustainability

Are our only interhuman duties to other presently existing human persons, or do we also have a responsibility to the more distant future?

- Environmental Sustainability principles can be formulated as direct duties to preserve the ecological bases of intrinsic natural value;
- or they can be formulated as anthropocentric principles aimed at preserving parts of the biosphere that are crucial for human welfare because of their many “ecosystem services.”
- either way, they will be best stated as norms requiring us
 - (a) to preserve the *capital base* (endowment) of the relevant ecosystems or parts of the biosphere
 - (b) by using or displacing less than the annual *carrying capacity* of that aspect of the biosphere
 - (c) in order to ensure its continued productivity in perpetuity, or into the indefinite future.

This is the same kind of principles that trustees use to manage the endowment funds of a charity or university when its operations are meant to continue in perpetuity.

Related global environmental problems:

- (1) global warming and the buildup of greenhouse gasses;
- (2) human population growth and the growth of natural resources use;
- (3) groundwater carrying capacity;
- (4) desertification and topsoil erosion, loss of arable land;
- (5) economic development of third-world nations and proportional responsibility;
- (6) our fragmented global political structures.