

EES 100 -- Human Population and the Global Environment

Fall 2006

“The Earth has seen five great extinction spasms in its history: the twentieth century showed signs of starting a sixth, the only one caused by humanity. ...Altogether, by 2000 the proportion of life on earth that served human ends, directly or indirectly, approached 40 percent on land and 10 percent in the seas, probably five to eight times as much as in 1900. So, in the process of trying to feed ourselves, make money, and protect ourselves from our fellows, we recast the biosphere dramatically, inserting ourselves as the main force shaping biological evolution. In the short run this unconscious process brought far more people, less famine, more wealth, and longer life than ever before in human history. How it will play out in the long run remains to be seen.” McNeill & McNeill, The Human Web. p. 286

Time: Monday, Wednesday, Friday -- 1:10 to 2:00

Location: 100 D.P. Corbett Hall

Instructor: Mark W. Anderson, Senior Instructor, Department of Resource Economics and Policy. Coordinator, Ecology and Environmental Sciences Program

Office: 305 Winslow Hall

Phone: 581-3198

email: Mark Anderson on FirstClass

Office Hours: Wednesdays, 8:00 to noon. Other times as available or by appointment.

Graduate Teaching Assistant: Megan Tylka

Course Objectives:

- For you to understand the concepts and principles necessary to evaluate contemporary issues of population growth, natural resource conservation, and environmental protection.
- For you to understand the historical development of environmental awareness in the United States.
- For you to interpret diverse types of information about environmental issues, to develop your own perspectives on these issues, and to communicate these perspectives more effectively.
- Collectively these three objectives address the spirit of the learning outcomes goal in UMaine’s general education requirement for the area of population and the environment. See:

http://www.catalog.umaine.edu/content.php?catoid=41&page=rpp_general_education.html

Texts and Supplies:

- 1) Paul Harrison and Fred Pearce. 2000. AAAS Atlas of Population & Environment. Berkeley: University of California Press
- 2) Roderick Nash. 1990. American Environmentalism: Readings in Conservation History. New York: McGraw-Hill.
- 3) Joseph McFalls Jr. 2003. "Population: A Lively Introduction." Population Bulletin. Vol. 58. No. 4.
- 4) Mary M. Kent and Carl Haub. 2005. "Global Demographic Divide." Population Bulletin. Vol. 60. No. 4.
- 5) Population Reference Bureau. 2005. "Transitions in World Population." Population Bulletin. Vol. 59. No. 1. Only available on-line, not in the University Bookstore:
http://www.prb.org/Template.cfm?Section=Population_Bulletin1&template=/ContentManagement/ContentDisplay.cfm&ContentID=12488

The Population Reference Bureau Bulletins by McFalls and by Kent and Haub are also available electronically from the Population Reference Bureau as pdf files:
http://www.prb.org/Template.cfm?Section=Population_Bulletin1&template=/PopulationBulletin2.cfm

- 6) J.R. McNeill. 2000. Something New Under the Sun: An Environmental History of the Twentieth-Century World. New York: W. W. Norton.

Grading: Letter grades will be assigned on the following proportions:

Prelim I	20%
Prelim II	25%
Weekly Definition Quizzes	12%
Participation -- in-class writing and in-class group work	13%
Final Exam (Comprehensive)	30%

The assignment of final grades for the course will follow the definitions of letter grades established by the faculty of The University of Maine:

- A -- superior work
- B -- good work
- C -- satisfactory but undistinguished work
- D -- poor work
- F -- Failure

+/- grades will **not** be assigned.

Your work on exams and quizzes will be evaluated on your mastery and integration of information from four distinct sources:

- reading assignments in the texts
- outline of material from unit study guides on FirstClass Conference and from PowerPoint presentations in lectures-my discussion and amplification in the lectures
- in-class writing and small group discussions

Exams: Exams will be given on the dates scheduled. Make-up exams will **only** be given if absences are excused for legitimate reasons by the course instructor **before** the exam. Requests for a make-up exam must be made **in writing**, giving the reason you believe the make-up will be necessary. If you have need of accommodations for a disability, please contact Ann Smith at Services of College Success Program, East Annex, 581-2319.

Exam questions will be drawn from both the readings and from class activities. Prelim. I will be multiple choice questions. Prelim II will be multiple choice questions and one short essay. The final examination will include multiple choice questions and one longer essay. The questions will be designed to allow you to demonstrate understanding of the key concepts of the course and their inter-relationships.

Unit study guides, a copy of this syllabus, and other supplementary materials will be in the FirstClass course conference folder for this class. You are expected to check this routinely.

Quizzes: There will be thirteen definition quizzes throughout the semester (on average one per week). The three lowest quiz grades for the semester will be discarded for calculating this portion of the grade. **So everyone gets three excused absences on quiz days. These include participation in university-sponsored events, illness, and other personal reasons for missing class. There will be no makeup quizzes.** Quizzes will be based on **key concepts** from material presented in the previous two weeks of the semester. The quiz will ask you to write in your own words the definition of a key concept from the reading assignments and/or lectures.

Class Attendance: You are expected to attend class. Exam questions will be based on both assigned readings and materials presented in class -- they do not duplicate each other.

Course Expectations:

What you can expect from me:

- that the requirements of the course are clear;
- that I have thought about how what I ask you to read fits with what we do in class — they will complement each other but will not be repetitions of each other;
- that I will design exams that fairly evaluate whether you have learned and can apply the material from the course;
- that I will answer your questions in class and to be available outside of class as much as you need to meet your learning objectives;
- that I will offer course materials in ways accessible to students with various learning styles.

What I expect from you:

- that you will become familiar with the syllabus and take responsibility for knowing what you need to do in this class and when. **The syllabus is a contract.**
- that you will attend class.
- that you routinely check the FirstClass Conference for this class
- that you will read assignments before class sessions, take good and sufficient class notes, and relate your class notes to the reading assignments.
- that you will invest sufficient time throughout the semester to meet your learning objectives — the course is designed so that the average student will need to spend six to nine hours outside of class each week to learn the material.

Course Units and Logic:

As shown above, the course has three broad objectives. Part of the course objective is substantive; it deals with acquiring knowledge both factual and conceptual. Part of the objective has to do with how you use this knowledge in developing your own view of the world.

The course looks both backward and forward in time. While we will spend time gaining historical perspective, this perspective is to help you develop your own sense about where this leads us in the 21st Century. One basic thesis of this course is that the 20th Century was an extraordinary time in human history. What happens after extraordinary times?

It is also important to note one objective that is **not** part of this course. It is not my goal to have you think like me on the issues we will be covering. I will expect you to understand basic concepts and facts, essentially the vocabulary of this course. How you use that vocabulary is for you to determine for yourself. I will challenge you

to think rigorously and to express yourself carefully; but I will not ask you to think like me.

Course Logic (unit title in *italics*):

Where are we going this semester? We will begin by developing some core ideas that will carry through virtually every other unit during the semester. You can think of this course as trying to answer a series of questions I will pose at the beginning.

The first of these core ideas is that of *Nature as a Resource* for humans. Modern life has distanced many humans from much direct contact with the natural world. This separation can lead to a loss of understanding of how it is that we remain inexorably tied to nature in our lives.

With this understanding of nature as provider for humans, next we will consider fundamental reasons why the 20th Century can be seen as *No Ordinary Time*. *The Human Population* changed in ways that were unprecedented in all human history. To understand the effects of human population growth you need first to understand both how and why it occurred.

The cause and the effect of this huge increase in human numbers is *(Almost) All About Energy*. Understanding the way energy sources and use have changed is a key part of this 20th Century change. This energy issue is most relevant to humans when it comes to *Food and Agriculture*. How food is produced and how humans eat (*Hunger or Heartburn*) both relate directly to the fundamental questions of the semester. With some of the basic facts of the human/nature relationship established, we then will turn to some significant resource and environmental policy issues that face us in the future. To do this, we begin by considering why such problems arise using the powerful explanatory concept of *Common Property*. This concept helps us think about numerous contemporary issues, including:

- Water*
- The Atmosphere*
- Climate change*
- Species Loss*

The remainder of the course will begin to step back and think about ways we can understand something called *Modernization* of human society. Here you will encounter two parts of modernization in addition to the demographic change covered earlier in the semester:

- Industrialization*
- Urbanization*

The way in which this phenomenon of Modernization spread to the rest of the world will be covered in the unit on *Globalization*

Each of these big changes has challenged the ability of humanity to manage resource and environmental issues. In particular, this is because of the growth of

Externalities, the unintended consequences of human behaviors on other people. The idea of externality is a powerful conceptual tool for addressing issues raised in this course.

Throughout the semester you will develop a good understanding of the causes and effects of several important contemporary resource and environmental issues facing human society. On each Friday during the course, we pause in the discussion of contemporary issues to consider the various ways American society responded to these issues in the century past. After a brief review of *20th Century Environmental History*, the intellectual foundations of contemporary thought will be outlined. This begins with *John Muir and Gifford Pinchot*. The legacy of Muir and Pinchot will give answers to the question, *How Did We Get Here?* The evolution of the ideas of Muir and Pinchot will help in understanding *Contemporary Environmental Politics*. This will then be the foundation for reviewing the rest of the Century and the evolving perspectives on environmental issues.

The question at this point will be one of what our responsibilities are to future generations and to other humans in the current generation. The idea of *Sustainability* for organizing our response to resource and environmental issues will be considered. Finally, we will conclude by considering the legacy of each of us as individuals. You will be asked to consider, *How Big is Your Footprint?*

Monday	Wednesday	Friday
	September 6 -Introduction -Syllabus	September 8 <i>Where Are We Going This Semester?</i> <i>The Context</i> AAAS Atlas, Foreword & pp. 3-11. McNeill, Preface & pp 1-17.
September 11 <i>Nature as Resource</i> AAAS Atlas pp. 21-34.	September 13 <i>Nature as Resource</i> (continued)	September 15 Environmental History <i>Introduction</i> -- Nash pp. 1-11; Chapters 2 & 4 - 7
September 18 <i>Human Population: No Ordinary Time</i> McNeill, pp. 269-276; Population Reference Bureau, “Population: A Lively Introduction”	September 20 <i>Human Population: No Ordinary Time</i> (continued) AAAS Atlas, pp. 12-20; Population Reference Bureau, “Transitions in World Population” Vol. 59, No. 1 at PRB wed site, address above	September 22 Environmental History <i>The Context of the 20th Century</i>
September 25 <i>Human Population: No Ordinary Time</i> (continued) Population Reference Bureau, “Global Demographic Divide”	September 27 <i>Human Population: No Ordinary Time</i> (continued)	September 29 Environmental History <i>Progressive Conservation</i> -- Nash pp. 69 - 71; Chapters 11 - 13, 16, & 17
October 2 <i>It's Almost All About Energy</i> AAAS Atlas, pp. 47 - 50; McNeill, pp. 296-324	October 4 <i>It's Almost All About Energy</i> (continued)	October 6 Preliminary Examination 1

October 9 Fall Break	October 11 <i>Fire in the Belly -- Heartburn or Hunger</i> -- McNeill, pp. 21-26, 35-49, 212-227; AAAS Atlas pp. 55-62, 71-82, & 115-118.	October 13 <i>Fire in the Belly -- Heartburn or Hunger</i> (continued)
October 16 Explanatory Concepts -- Common Property -- this short article on line: http://www.garretthardinsociety.org/articles/art_tragedy_of_the_commons.html	October 18 Fresh Water -- McNeill, Chapter 5 & pp. 149-182; AAAS Atlas, pp. 51-54, 135-138	October 20 <i>Conservation vs. Preservation</i> -- Nash Chapters 14, 15, & 18
October 23 <i>Atmosphere</i> -- McNeill, pp. 50-108 & 111 - 117; AAAS Atlas, pp. 95-98 & 103-106	October 25 <i>Atmosphere</i> (continued)	October 27 Environmental History <i>Conservation vs. Preservation</i> (continued)
October 30 <i>Climate Change</i> --McNeill, pp. 108-111; AAAS Atlas, pp. 99-102.	November 1 <i>Climate Change</i> (continued)	November 3 Environmental History <i>New Deal Environmentalism</i> -- Nash pp. 113-115, Chapters 19 - 22, 24
November 6 Preliminary Examination II	November 8 Explanatory Concept -- Externalities	November 10 Environmental History <i>Toward a New Environmentalism</i> -- Nash Chapters 23, 25 - 27

<p>November 13 <i>Biodiversity</i> -- McNeill, pp. 192 -- 212, 252-266; AAAS Atlas, pp. 27 - 34, 159-170.</p>	<p>November 15 Biodiversity (continued)</p>	<p>November 17 Environmental History <i>Earth Day</i> -- Nash pp. 187 - 189, Chapters 30 - 34</p>
<p>November 20 Environmental History <i>Earth Day</i> (continued)</p>	<p>November 22 Thanksgiving Break</p>	<p>November 24 Thanksgiving Break</p>
<p>November 27 Industrialization -- McNeill, pp. 26-35, 296-319. AAAS Atlas pp. 83-86; 111-114</p>	<p>November 29 Urbanization -- McNeill, pp. 276-295. AAAS Atlas, pp. 87-94</p>	<p>December 1 Environmental History <i>Radical Developments and Retrenchments</i> -- Nash Chapters 36 -39, pp. 255-258, & Chapters 44 - 47</p>
<p>December 4 Globalization -- McNeill pp. 319-324. AAAS Atlas pp. 67-71.</p>	<p>December 6 Environmental Politics -- McNeill pp. 325-356; AAAS Atlas pp. 35-37</p>	<p>December 8 Sustainability -- McNeill, Preface & pp. 1-17 (again) & pp. 357-363. AAAS Atlas, Foreword & pp. 3-37.</p>
<p>December 11 Sustainability (continued) --</p>	<p>December 13 <i>How Big is Your Footprint?</i></p>	<p>December 15 http://www.earthday.net/footprint/index.asp</p>
	<p>December 20 Final Exam 9:30-11:30</p>	