

Geography 130
Natural Resources and Population

Summer 2010
Tu W Th 9 – 11:30
145 McCone

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Office Hours: Tu & Th 12 – 1

Ever since publication of Thomas Malthus's *Essay on the Principle of Population* in 1798, the English-speaking world has equated population growth with apocalypse. Despite having been repeatedly debunked, Malthusian logic continues to inform present-day debates, inspiring fears of catastrophic plagues, widespread famine, uncontrolled immigration, ecological degradation, economic collapse, and political anarchy.

This course is grounded in the idea that human-environment relations are always social relations. How natural resources are produced, distributed, valued, consumed, conserved and degraded are historically- and geographically-specific questions whose answers cannot be reduced to the Earth's "carrying capacity" or a "population bomb." While the world's population has never been larger, and its environmental prospects have never been as dim as at present, the outcomes of population growth and natural resource development (or depletion) are neither preordained nor very predictable.

We will begin with an overview of human population trends and associated environmental change, followed by an overview of various theories on human-environment interactions, including a number of case studies. Several key issues—food, agriculture, urbanization, waste, water, fisheries, and fuel—will highlight the spatial and social complexities of resource use. We will see that environmental issues are always intimately related to political and economic ones—colonialism, capitalism, the state, science, and so forth—and "the natural" cannot be abstracted from "the social."

Course Requirements:

This class will consist of a mixture of lectures, discussion, small group work, guest speakers, and films/videos. We will often spend the second half of each class discussing key concepts from the course readings (much like a discussion section during the year). To make this work for all of us, it is essential that you: 1) complete all of the assigned readings, 2) intellectually engage with these texts, 3) come prepared with a well-formulated discussion question, and 4) review your lecture notes.

This is a reading-intensive course. Expect to read ~50 pages per class, sometimes more, sometimes less. Readings are all available under Resources tab in b-space.

You will be graded on the following:

Participation (25%): Participation means actively and consistently engaging with the course material, and engaging in dialogue with your classmates. You can do this by speaking up in section, listening responsively, bringing in information, drawing connections between the course and relevant outside experience or current events, or talking with me in office hours. Your participation will be graded based on your attendance and participation in discussions (both in small 'work groups' and in the whole class).

Preparation for Discussion: You are required to prepare a well-crafted question about the day's readings. These questions can be efforts to interrogate the authors' key claims or assumptions, weigh theories against each other, or relate theories and course materials to contemporary events and life outside of class. They should not be questions asking for factual answers (eg, what's the capital of Burundi, how many tons of CO₂ does a rainforest sequester); rather, these questions should get people to think and prompt discussion. Jot this down in your notes to bring to class for discussion.

Attendance: This is a short class and we cover a lot of material each time we meet. It is essential that you come to class *every day*. You must sign in each morning when you arrive to be considered present. Please be on time. If you are going to be absent for any reason, please inform me ahead of time. *Documented illness, pre-approved athletic or extracurricular events, or personal emergencies* are all considered excused and they do not affect your grade. Each unexcused absence will lower your participation grade.

Reading Responses (25%) To assure your close reading of the course materials, you are required to turn in a brief summary of each day's readings in class the day the readings are to be discussed. For each reading, write a few sentences that summarize the main arguments/key claims. You should then take the extra step to synthesize the articles, ie, why are they grouped together, how do they build on one another, contradict, support each other, etc? Use this opportunity to *engage w/* the readings: raise questions, draw conclusions, add your own critical commentary or ideas. This critical assessment can either be incorporated into the paragraph, or as a separate paragraph at the end. Your response should be about one-third to one-half of a page (single-spaced). The point is for you to engage with the readings in a way that's meaningful to you, that a) gets you to remember what you've read, and b) allows you to think through the ideas proposed by the different authors and how they relate to one another. A simple summary is the bare minimum. A "thoughtful synthesis" better describes what I'm looking for. This will prep you for discussion and make it seem like less of a headache. These can be single-spaced to not waste paper. These won't be returned to you, so make sure you keep a copy for yourself.

Midterm (25%): This will consist of definitions, short answers, and a short essay question. The exam will be held in class on Thursday 6/10.

Group Project / Presentation (25%): Working in groups of three or four, each group will research a natural resource issue and prepare a 9 to 12-page research paper and ten-minute presentation to be given on one of the last two days of class. Details to follow.

Office Hours: My office hours are Tu & Th from 12 to 1 pm in my office (199 McCone). If you absolutely can't make it at this time, please email me to set up an appointment. Come to office hours to talk about assignments, lecture, readings, and any other concerns related to the course. I'll be glad to discuss your ideas and clarify things from class. I'm also happy to use office hours to discuss your personal interests in particular environmental issues or career paths.

Academic Dishonesty: Academic dishonesty obstructs learning and is prohibited. Plagiarism is the use of intellectual material produced by another person without properly citing its source. If you are unclear as to what constitutes plagiarism, you should review the "Academic Honesty: a Guide for Students" prepared by the Office of Student Conduct and posted to b-space under Resources, or send me an email for clarification. Do not plagiarize.

Special Accommodations: Please contact me as soon as possible if you need any special accommodations for this class. If possible, please provide a copy of your accommodation letter from DSP when you contact me.

Class Rules: Turn off cell phones. No sleeping, Facebooking, texting, or emailing during class.

Course Schedule & Readings:

Week 1

Tu 5/25: Human Population in the Anthropocene

- *Millennium Ecosystem Assessment*. Summary for Decision-Makers, pp.1-24.

(Because it's the first day, we will go over this in class, but be sure to read it yourself before the midterm).

W 5/26: Malthus & Malthusian Thinking

- Thomas R. Malthus (1798) *Essay on the Principle of Population*, Chs 1 – 5, pp. 4– 32. Begin w/ "I think I may fairly make two postulata"...
- Julia Whitty (2010) The Last Taboo. *Mother Jones* (May/June). Online: <http://motherjones.com/environment/2010/05/population-growth-india-vatican>

Th 5/27: Malthusian Thinking 2: Defusing the Population Bomb

- Garret Hardin (1968) The Tragedy of the Commons. *Science* 162:1243-1248.
- Matthew Connelly (2008) *Fatal Misconception: The Struggle to Control World Population*. Cambridge: Harvard University Press. pp. 1 – 17
- Amartya Sen (1994) Population: Delusion and Reality. *New York Times Review of Books*
- Fred Pearce (2010) The Overpopulation Myth. *Prospect* 168 (8 March) <http://www.prospectmagazine.co.uk/2010/03/the-overpopulation-myth/>

Week 2

Tu 6/1: Beyond Malthusian Explanations: Value, Labor & Markets

- Adam Smith: *An Inquiry into the Nature and Causes of the Wealth of Nations*. Book 1, Ch. 1 (Of the Division of Labor) & Ch. 4 (Of the Origin and Use of Money). Also skim Chs. 5 – 8 (not in print version). Online: <http://www.econlib.org/library/Smith/smWN.html>
- Karl Marx (1867) *Capital*, vol. 1, ch. 15, section 10: “Large-scale industry and agriculture”; ch. 25, sections 3 and 4: “The Progressive production of a relative surplus population or industrial reserve army” and “Different forms of existence of the relative surplus population. The general law of capitalist accumulation.”
Online: <http://www.econlib.org/library/YPDBooks/Marx/mrxCpA.html>

W 6/2: Famines: Malthusian or Market-Driven?

- Mike Davis (2002) *Late Victorian Holocausts: El Niño Famines and the Making of the Third World*. London: Verso. pp. 1 – 59, 119 – 121

Film: *Darwin’s Nightmare* (2005, 107 minutes)

Th 6/3: Making the Third World

- Davis, *Late Victorian Holocausts*, pp. 281 – 310
- Andrew Rice (2009) Is there such thing as agro-imperialism? *New York Times Magazine*. November 16. <http://www.nytimes.com/2009/11/22/magazine/22land-t.html>

Week 3

Tu 6/8: Urbanization & Metabolic Rift

- Mike Davis (2004) Planet of Slums. *New Left Review* 26(2):5-34 (read through p. 27)
- Robin M. Leichenko and William D. Solecki (2005) Exporting the American dream: the globalization of suburban consumption landscapes. *Regional Studies* 39: 241-253
- Nico Keilman (2003) The threat of small households. *Nature* 421:489-490

W 6/9: Metabolic Rift 2: Pollution & Waste

Readings:

- Vaclav Smil (2004) *Enriching the Earth*. Ch. 10 Nitrogen and Civilization: Managing the Nitrogen Cycle. Cambridge: MIT Press. pp. 199 – 221
- Alan R. Townsend and Robert W. Howart (2010) Fixing the Global Nitrogen Problem. *Scientific American* (February)
- Heather Rodgers. *Gone Tomorrow: The Hidden Life of Garbage*. New York: The New Press. pp. 11 – 27, 183 – 205.

Guest Speaker: Adam Romero, UC Berkeley

Th 6/10: MIDTERM EXAM (no readings)

Week 4

Tu 6/15: Sodbusting and Seeds: Farming Goes Industrial

- Jack Kloppenburg: *First the Seed: the Political Economy of Plant Biotechnology*. Madison: University of Wisconsin Press. pp. 1 – 49
- Donald Worster: *Dust Bowl: the Southern Plains in the 1930s*. New York: Oxford University Press. pp. 1 – 8, 78-97

W 6/16: Agri-Food's Externalities

- Matson, P.A., W.J. Parton, A.G. Power, and M.J. Swift. 1997. Agricultural intensification and ecosystem properties. *Science* 277:504-509.
- Rosamond Naylor et al. 2005. Losing the Links Between Livestock and Land. *Science* 310: 1621-1622.
- Klein, Ezra. 2009. The meat of the problem. *Washington Post*, 29 July.
Online: http://www.washingtonpost.com/wp-dyn/content/article/2009/07/28/AR2009072800390_pf.html

Film: *Food, Inc.* (2008, 94 minutes)

Thursday 6/17: Agri-Food 2: Towards a Sustainable Agriculture

- David Tilman (1998) The greening of the green revolution. *Nature* 396: 211-212.
- David R. Keller & E. Charles Brummer (2002) Putting Food Production in Context: Towards a Post-Mechanistic Agricultural Ethic. *BioScience* 52(3):264 – 271.
- Miguel Altieri (1999) The ecological role of biodiversity in agroecosystems. *Agriculture, Ecosystems and Environment* 74:19-31.

Guest Speaker: Albie Miles, UC Berkeley

Week 5

Tu 6/22: Aquacalypse Now? The Globalization of Fisheries

- Daniel Pauly et al (2002) Towards sustainability in world fisheries. *Nature* 418:689-695.
- Rebecca Clausen and Brett Clark (2005) The Metabolic Rift and Marine Ecology: An Analysis of the Ocean Crisis Within Capitalist Production. *Organization & Environment* 18: 422-444.
- Justin S. Brashares et al. (2004) Bushmeat Hunting, Wildlife Declines, and Fish Supply in West Africa. *Science* 306:1180-1183

Film: *The End of the Line* (2008, 85 minutes)

W 6/23: Renewable Energy and its Externalities

- Leo Lewis. 2007. To eat... or to drive? *Times Online* (London) August 25 (3 pp.).
- George Monbiot. 2007. An Agricultural Crime Against Humanity. *Guardian* (6 November)
- Valerie Kuletz (1998) *The Tainted Desert: Environmental Ruin in the American West*. New York: Routledge. Ch. 4: Nuclear Wasteland, pp. 81 – 101.

Guest Speaker: Shannon Cram, UC Berkeley

Th 6/24: Water & Oil

- Retort (2005) Blood for Oil? *London Review of Books* 27(8):12-16
<http://www.lrb.co.uk/v27/no8/-retort/blood-for-oil>
- Karen Bakker (2007) The “Commons” versus the “Commodity”: Alter-globalization, Anti-privatization and the Human Right to Water in the Global South. *Antipode* 39(3): 430-455.

Film: *Flow: For Love of Water* (2008, 93 minutes)

Week 6

Tu 6/29: Valuing Ecosystems Services or Commodification of the Commons?

- Robert Costanza et al (1997) The value of the world's ecosystem services and natural capital. *Nature* 387:253 – 280
- Richard B. Norgaard (2010) Ecosystems services: From eye-opening metaphor to complexity blinder. *Ecological Economics* 69:1219 – 1227
- Elinor Ostrom et al (1999) Revisiting the Commons: Local Lessons, Global Challenges. *Science* 284:278-282.
- Douglas J. McCauley (2006) Selling out on nature. *Nature* 443:27-28.

W 6/30: Group Presentations

Th 7/1: Group Presentations / Closing Thoughts