

## POPULATION AND THE ENVIRONMENT

Sociology 5161

Wednesday, 5:00-7:50 p.m., Ketchum 118  
Spring Semester, 2001

Lori M. Hunter

Office: Ketchum 214

Phone: 735-4090 or 492-1006

Email: Lori.Hunter@colorado.edu

Office Hours: Wednesday 12:00-3:00

**OVERVIEW:** This course provides an overview of social science theory and research relating human population to environmental context. Population processes influence the demands placed upon land, air, and water environments -- as the environment provides resources necessary for human survival. Population processes also relate to environmental pollutants -- air, water, and land environments all act as sinks, or repositories, for the pollution generated by contemporary production and consumption processes.

In general, our readings and discussions provide insight into different arenas of association between humans and the environmental context. For instance, we explore the values and perceptions which individuals hold regarding the environment. We also examine human population factors related to climate change, biodiversity, and the ways in which gender mediates human-environment associations. Specific regional research allows the opportunity to consider the ways in which demographic processes exert influences on these environmental resources, as well as the ways in which environmental characteristics exert influence on demographic processes. Finally, we spend a week examining the social distribution of environmental hazards, an issue termed "environmental justice."

The readings represent recent academic research from multiple social science disciplines including sociology, geography, economics, and political science. Through the course of the semester, we will examine theoretical and empirical work at local, national, regional, and international scales, examining a wide range of domestic and international issues which relate to human-environment interactions.

### SPECIFIC

**AIMS:** Following this course, students should be familiar with:

- ◆ several theoretical perspectives from the social sciences used to examine interactions between population and the environmental context;
- ◆ specific examples of recent social science research on the social dimensions of environmental context, including public opinion and the social distribution of risk;

- ◆ specific examples of recent social science research on the environmental implications of population dynamics;
- ◆ specific examples of recent social science research on the reciprocal effect of environmental factors on demographic processes;
- ◆ the role of mediating factors (e.g., technology, policy, culture) in shaping the relationship between population and the environment;
- ◆ the methodological dilemmas characterizing social and natural science linkages;
- ◆ many resources available to researchers examining human-environment interactions.

READINGS: The weekly readings represent journal articles and book excerpts offering a glimpse of current research on each topic. The readings are available from Michele Noe in the Sociology office. It is suggested you photocopy the articles for review at your own pace.

EVALUATION: The grade for this course will be based upon:

*Percentage of final score*

Discussion “guide”	10
Weekly Article Summaries & “Provocations”	15
Class Participation	15
Summary Paper and Presentation (due May 2)	30
Final “Comprehensive” Exam (date TBD)	30

**Discussion “guide”:**

Each student will select one week for which they will act as the seminar’s discussion “guide”. The weekly “guide” will meet with Lori prior to class to review the main messages of the week’s reading. The student will act to bridge the various articles and enlighten the group on relevant resources and information available elsewhere. To relate the assigned articles to material outside of the reading list, the discussion guide will bring in material relevant to the subject but not included on the syllabus -- e.g., charts, graphs, texts, quotes.

**Summary Paper and Class Presentation:**

On Tuesday, March 21, students will commit to a particular topic on which to focus more in-depth in a 10-15 page, double-spaced, summary paper. The paper should **critically** review existing research and knowledge. Papers are due May 2, when students will also offer a short class presentation of the material.

**Final “Comprehensive” Exam:**

On a pre-arranged date during finals week, students will be given two questions, each to be answered within 4-5 pages, double-spaced. The questions will be handed out at 8:00 a.m., to be returned by 5:00 p.m. The format is designed to reflect what could be expected from a doctoral comprehensive examination.

**Weekly Article Summaries / Provocations:**

Each student will be responsible for a *brief* summary of *each* of the assigned readings, in addition to bringing questions/comments on the week’s reading material (“provocations”). The

summaries and “provocations” will be submitted to the instructor and returned the following week.

### **Class Participation:**

Intellectual discourse is central to the learning process and to this course. However, class participation is not based strictly on *quantity*, but also *quality*. Remember to ground your comments in the material we are reading, and to respect other points of view.

*Please come see me, call me, or send an E-mail, if you have any questions, concerns, or problems!*

## **DETAILED SCHEDULE**

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<b>WEEK 1</b>	<b>JAN 18</b>	<b>INTRODUCTION AND OVERVIEW</b>
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- ◆ Review syllabus;
- ◆ Handout/discussion of electronic discussion lists;
- ◆ Sign up for weeks in which to guide class discussion.

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<b>WEEK 2</b>	<b>JAN 24</b>	<b>- POPULATION AND ENVIRONMENT OVERVIEWS</b> <b>- DEMOGRAPHY AND THE ENVIRONMENT</b> <b>- THE ENVIRONMENTAL CONTEXT OF THE POPULATION “DEBATE”</b>
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Demeny, Paul. 1990. “Population.” Pp. 41-54 in B.L. Turner II, William C. Clark, Robert W. Kates, John F. Richards, Jessica T. Mathews, William B. Meyer, (Eds), *The Earth as Transformed by Human Action: Global and Regional Changes in the Biosphere over the Past 300 Years*. Cambridge University Press: Cambridge, MA.

Clarke, John I. 1996. “The Impact of Population Change on Environment: An Overview.” Pp. 254-268 in Bernardo Colombo, Paul Demeny, and Max F. Perutz, (Eds.), *Resources and Population: Natural, Institutional, and Demographic Dimensions of Development*. Clarendon Press, Oxford.

Pebley, Anne R. 1998. “Demography and the Environment.” *Demography*. Vol. 35, No. 4, November: 377-389.

### **The Environmental Context of the Population “Debate”**

Smail, J.K. 1997. “Beyond Population Stabilization: The Case for Dramatically reducing Global Human Numbers” *Politics and Life Sciences*. Vol. 16, Sept: 183-192.

Virginia Deane Abernethy. 1997. “The Right Incentive: How Perceived Scarcity May Stop Population Growth in Time.” *Politics and Life Sciences*. Vol. 16, Sept: 193-195.

Lutz, Wolfgang. 1997. “Female Education Likely to Lead to Long-Term Population Decline and Near-Term Gain in Quality of Life.” *Politics and Life Sciences*. Vol. 16, Sept: 209-211.

Hartmann, Betsy. 1997. "Numbers games and final solutions. Comment on J.K. Smail." *Politics and Life Sciences*. Vol. 16, Sept: 204-5.

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**WEEK 3**

**JAN 31**

**THEORETICAL FRAMEWORKS:  
DIFFERING PERSPECTIVES ON POPULATION-ENVIRONMENT INTERACTIONS**

Gross, Matthias. 2000. "Classical Sociology and the Restoration of Nature: The Relevance of Emile Durkheim and Georg Simmel." *Organization and Environment*. Vol. 13, No. 3: 277-291.

Gimenez, Martha. 2000. "Does Ecology Need Marx?" *Organization and Environment*. Vol. 13, No. 3:292-304.

Boserup, Ester. 1996. "Development theory: an analytical framework and selected applications." *Population and Development Review*. Vol. 22, Sept: 505-515.

**Brief excerpts from classic, oft-cited literature:**

Duncan, Otis Dudley. 1960. "From Social System to Ecosystem." *Sociological Inquiry*. Vol. 31, No. 2: 140-149.

Ehrlich, Paul R. and Anne H. Ehrlich. 1991. Excerpts from *The Population Explosion*. Simon and Schuster: New York, NY.

Simon, Julian L. 1996. Excerpts from *Population Matters: People, Resources, Environment, and Immigration*. Transaction Publishers: New Brunswick, NJ.

Malthus, Thomas R. 1798. Excerpts from *An Essay on the Principle of Population*. Reprinted by Oxford University Press: Oxford, UK.

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**WEEK 4**

**FEB 7**

**COMMON PROPERTY RESOURCES: THEORY AND PRACTICE**

Hardin, Garrett. 1968. "The Tragedy of the Commons." *Science*. Vol. 162, No. 13, December: 1243-1248 as reprinted in Rex R. Campbell and Jerry L. Wade, (Eds), *Society and Environment: The Coming Collision*. Allyn and Bacon, Inc: Boston, MA.

Ostrom, Elinor, Joanna Burger, Christopher B. Field, Richard B. Norgaard, and David Policansky. 1999. "Revisiting the Commons: Local Lessons, Global Challenges." *Science*. Vol. 284, April 9: 278-282.

Acheson, James. 2000. "Clearcutting Maine: Implications for the Theory of Common Property Resources." *Human Ecology*. Vol. 28, No. 2: 145-169.

McCabe, J.T. 1990. "Turkana pastoralism: A case against the tragedy of the commons." *Human Ecology*. Vol. 18: 31-103.

Gibson, Clark and Tomas Kontz. 1998. "When Community is Not Enough: Institutions and Values in Community-Based Forest Management in Southern Indiana." *Human Ecology*. Vol. 26, No. 4, December: 621-647.

Dunlap, Riley E. and Angela G. Mertig. 1992. "Trends in Public Opinion Toward Environmental Issues: 1965-1990." Pp. 89-116 in *American Environmentalism: The U.S. Environmental Movement, 1970-1990*. Dunlap and Mertig (Eds). Taylor and Francis: New York, NY.

Dietz, Thomas, Paul C. Stern, and Gregory A. Guagnano. 1998. "Social Structural and Social Psychological Bases of Environmental Concern." *Environment and Behavior*. Vol. 30, No. 4:450-471.

Morrissey, Jennifer and Robert Manning. 2000. "Race, Residence, and Environmental Concern." *Human Ecology Review*. Vol. 7, No. 1: 12-23.

Greider, Thomas and Lorraine Garkovich. 1994. "Landscapes: The Social Construction of Nature and the Environment." *Rural Sociology*. Vol. 59, No. 1:1-24.

Bertolas, Randy James. 1998. "Cross cultural environmental perception of wilderness. Native Cree of northern Quebec, non-Natives of southern Quebec, and Vermonters." *The Professional Geographer*. Vol. 50, No. 1, Feb: 98-111.

Vining, Joanne and Elizabeth Tyler. 1999. "Values, Emotions, and Desired Outcomes Reflected in Public Responses to Forest Management Plans." *Human Ecology Review*. Vol. 6, No. 1:21-34.

Rindfuss, Ronald R. and Paul C. Stern. 1998. "Linking Remote Sensing and Social Science: The Need and the Challenges." Pp. 1-27 in Diana Liverman, Emilio F. Moran, Ronald R. Rindfuss, and Paul C. Stern, (Eds)., *People and Pixels: Linking Remote Sensing and Social Science*. Committee on the Human Dimensions of Global Change, Commission on Behavioral and Social Sciences and Education, National Research Council, National Academy Press:Washington DC.

**Research Examples:**

Entwisle, Barbara, Stephen J. Walsh, Ronald R. Rindfuss, and Aphichat Chamrathirong. 1998. "Land-Use/Land-Cover and Population Dynamics, Nang Rong, Thailand." Pp. 121-144 in Diana Liverman, Emilio F. Moran, Ronald R. Rindfuss, and Paul C. Stern, (Eds)., *People and Pixels: Linking Remote Sensing and Social Science*. Committee on the Human Dimensions of Global Change, Commission on Behavioral and Social Sciences and Education, National Research Council, National Academy Press:Washington DC.

Sever, Thomas L. 1998. "Validating Prehistoric and Current Social Phenomena upon the Landscape of the Peten, Guatemala." Pp. 145-163 in Diana Liverman, Emilio F. Moran, Ronald R. Rindfuss, and Paul C. Stern, (Eds)., *People and Pixels: Linking Remote Sensing and Social Science*. Committee on the Human Dimensions of Global Change, Commission on Behavioral and Social Sciences and Education, National Research Council, National Academy Press:Washington DC.

Cowen, David J. and John R. Jensen. 1998. "Extraction and Modeling of Urban Attributes Using Remote Sensing Technology." Pp. 164-188 in Diana Liverman, Emilio F. Moran, Ronald R. Rindfuss, and Paul C. Stern, (Eds)., *People and Pixels: Linking Remote Sensing and Social Science*. Committee on the

Human Dimensions of Global Change, Commission on Behavioral and Social Sciences and Education, National Research Council, National Academy Press: Washington DC.

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**WEEK 7                      FEB 28                      REGIONAL RESEARCH I: ASIA**

Matthews, Stephen A., Ganesh P. Shivakoti and Netra Chhetri. 2000. "Population Forces and Environmental change: Observations from Western Chitwan, Nepal." *Society and Natural Resources*. Vol.13: 763-775.

Amacher, Gregory S., William F. Hyde, and Keshav R. Kanel. 1996. "Household Fuelwood Demand and Supply in Nepal's Tarai and Mid-Hills: Choice Between Cash Outlays and Labor Opportunity." *World Development*. Vol. 24, No. 11: 1725-1736.

Shivakoti, Ganesh P., William G. Axinn, Prem Bhandari, Netra B. Chhetri. 1999. "The Impact of Community Context on Land Use in an Agricultural Society." *Population and Environment* Vol. 20, No. 3, Jan: 191-213.

Fearnside, Philip M. 1997. "Transmigration in Indonesia: Lessons from its Environmental and Social Impacts." *Environmental Management*. Vol. 21, No. 4: 553-570.

Umezaki, Masahiro, Yukio Kuchikura, Taro Yamauchi, and Ryutaro Ohtsuka. 2000. "Impact of Population Pressure on Food Production: An Analysis of Land Use Change and Subsistence Pattern in the Tari Basin in Papua New Guinea Highlands." *Human Ecology*. Vol. 28, No. 3: 359-381.

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**WEEK 8                      MARCH 7                      REGIONAL RESEARCH II: AFRICA**

Kalipeni, Ezekiel. 1996. "Demographic Response to Environmental Pressure in Malawi." *Population and Environment*.

Neupert, Ricardo F. 1999. "Population, Nomadic Pastoralism, and the Environment in the Mongolian Plateau." *Population and Environment: A Journal of Interdisciplinary Studies*, Vol. 20, No. 5, May: 413-442.

Tiffen, Mary and Michael Mortimore. 1994. "Malthus Controverted: The Role of Capital and Technology in Growth and Environment Recovery in Kenya." *World Development*. Vol. 22, No. 7, July: 997-1010.

Conelly, W. Thomas and Miriam S. Chaiken. 2000. "Intensive Farming, Agro-Diversity, and Food Security under Conditions of Extreme Population Pressure in Western Kenya." *Human Ecology*. Vol. 28, No. 1: 19-51.

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**WEEK 9                      MAR 14                      REGIONAL RESEARCH III: LATIN AMERICA AND SOUTH AMERICA**

Perz, Stephen G. 1997. "The Environment as a Determinant of Child Mortality Among Migrants in Frontier Areas of Para and Rondonia, Brazil, 1980." *Population and Environment: A Journal of Interdisciplinary Studies*, Vol. 18, No. 3, January: 301-324.

Rosero-Bixby, Luis and Alberto Palloni. 1998. "Population and Deforestation in Costa Rica." *Population and Environment*. Vol. 20, No.2: 149-185.

McCracken, Stephen D., Andrea Siqueira, Emilio Moran, and Eduardo Brondízio, Donald Nelson, (In press). "Land-Use Patterns on an Agricultural Frontier in Brazil: Insights and Examples from a

Demographic Perspective.” In *Patterns and Processes of Land Use and Forest Change in the Amazon*, ed. C. Wood et al. Gainesville: University of Florida Press.

Walker, R., A. Homma, L. Anselin, and Emilio Moran. 2000. “Deforestation and Cattle Ranching in the Brazilian Amazon: External Capital and Household Processes.” *World Development*. Vol. 28, No. 4.:683-699.

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**WEEK 10            MAR 21            REGIONAL RESEARCH IV: NORTH AMERICA**

Waggoner, Paul E., Jesse H. Ausubel, and Iddo K. Wernick. 1996. “Lightening the Tread of Population on the Land: American Examples.” *Population and Development Review*. Vol. 22, No. 3: 531-545.

Smutny, G. and L. Takahashi. 1999. “Economic change and environmental conflict in the Western Mountain states of the USA.” *Environment and Planning A*. Vol. 31:979-995.

White, Stephen E. 1994. “Ogallala Oases: Water Use, Populatoin Redistribution, and Policy Implications in the High Plains of Western Kansas, 1980-1990.” *Annals of the Association of American Geographers*. Vol. 84, No. 1:29-45.

Cramer, James C. and Robin P. Cheney. 2000. “Lost in the Ozone: Population Growth and Ozone in California.” *Population and Environment: A Journal of Interdisciplinary Studies*. Vol. 21, No. 3: 315-338.

Bradshaw, Ted K. and Brian Muller. 1998. “Impacts of rapid urban growth on farmland conversion: application of new regional land use policy models and geographical information systems.” *Rural Sociology*. Vol. 63, No. 1, March: 1-25.

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**WEEK 11            MAR 28            SPRING BREAK**

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**WEEK 12            APRIL 4            POPULATION AND CLIMATE CHANGE**

Rosa, Eugene A. and Thomas Dietz. 1998. “Climate Change and Society: Speculation, Construction, and Scientific Investigation.” *International Sociology*. Vol. 13, No. 4: 421-455.

O’Neill, Brian, Landis F. MacKellar, and Wolfgang Lutz. 2000. Excerpts from *Population and Climate Change*. Cambridge University Press.

Dietz, Thomas and Eugene A. Rosa. 1997. “Effects of population and affluence on CO<sub>2</sub> emissions.” *Proceedings of the National Academy of Sciences*. Vol. 94:175-179.

Kempton, Willett. 1991. “Lay Perspectives on Global Climate Change.” *Global Environmental Change*. June: 183-209.

Henry, Adam Douglas. 2000. “Public Perceptions of Global Warming.” *Human Ecology Review*. Vol. 7, No. 1: 25-30.

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**WEEK 13**      **APR 11**      **GENDER AND THE ENVIRONMENT**

Zelezny, Lynnette C., Poh-Pheng Chua, and Christina Aldrich. 2000. "Elaborating on Gender Differences in Environmentalism." *Journal of Social Issues*. Vol. 56,N. 3: 443-457.

Brown, Phil and Faith I. T. Ferguson. 1994. "'Making a Big Stink': Women's Work, women's Relationships, and Toxic Waste Activism."

Paolisso, Michael, Sarah Gammage, and Linda Casey. 1999. "Gender and Household Level Responses to Soil Degradation in Honduras." *Human Organization*. Vol. 58, No. 3: 26-273.

Fortmann, Louise, Camille Antinori, and Nontokozi Nabane. 1997. "Fruits of their labors: gender, property rights, and tree planting in two Zimbabwe villages." *Rural Sociology*. Vol. 62, No. 3:295-314.

Ahmed, Miyan Ruknuddin and Jan G. Laarman. 2000. "Gender Equity in Social Forestry Programs in Bangladesh." *Human Ecology*. Vol. 28, No. 3: 433-450.

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**WEEK 14**      **APR 18**      **POPULATION AND BIODIVERSITY**

National Research Council. 1999. "What is Biodiversity?" Pp. 20-42 in *Perspectives on Biodiversity: Valuing its Role in an Everchanging World*. National Academy Press: Washington DC.

Kellert, Stephen R. 1996. *The Value of Life*. Chapter 2: Values and Chapter 3: American Society. Island Press: Washington DC.

Sisk, Thomas D., Alan E. Launer, Kathy R. Switky, and Paul R. Ehrlich. 1994. "Identifying Extinction Threats: Global Analyses of the Distribution of Biodiversity and the Expansion of the Human Enterprise." *BioScience*. Vol. 44, No. 9: 592-604.

Liu, Jianguo, Zhiyun Ouyang, William W. Taylor, Richard Groop, Yingchun Tan, and Heming Zhang. 1999. "A Framework for Evaluating the Effects of Human Factors on Wildlife Habitat: the Case of Giant Pandas." *Conservation Biology*. Vol. 13, No. 6, December:1360-1370.

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**WEEK 15**      **APR 25**      **THE ENVIRONMENT AS HAZARD**

Getches, David and David N. Pellow. 2001. "Beyond 'Traditional' Environmental Justice: How Large a Tent?" In Kathryn Mutz, Gary Bryner, and Douglas Kenney (Eds). *Justice and Natural Resources*. Island Press: Washington, D.C.

Hird, John A. and Michael Reese. 1998. "The Distribution of Environmental Quality: An Empirical Analysis." *Social Science Quarterly*. Vol. 79, No. 4: 693-716.

Mitchell, Jerry T., Deborah S.K. Thomas, and Susan L. Cutter. 1999. "Dumping in Dixie Revisited: The Evolution of Environmental Injustices in South Carolina." *Social Science Quarterly*. Vol. 80,No.2: 229-243.

Shaikh, Sabina L. and John B. Loomis. 1999. "An Investigation into the Presence and Causes of Environmental Inequity in Denver, Colorado." *The Social Science Journal*. Vol. 36, No. 1: 77-92.

Boon, Christopher G. and Ali Modarres. 1999. "Creating a Toxic Neighborhood in Los Angeles County: A Historical Examination of Environmental Inequity." *Urban Affairs Review*. Vol. 35,No. 2: 163-187.

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**WEEK 16**      **MAY 2**      **PAPER PRESENTATIONS**

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**FINAL EXAM**      **DATE TO BE DETERMINED**