



Environmental Social Sciences (ENV 202)

Davidson College

Fall 2016

Class Times: Tuesday and Thursday, 3:05 pm – 4:20 pm

Class Location: Wall 210

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COURSE INTRODUCTION

This course provides an overview of social science perspectives on environmental issues. As a required course for the environmental studies major, the course takes both a thematic and problem-based approach to the study of interactions between society and the environment. Students in the course will learn to integrate concepts and methods from the social sciences (anthropology, economics, geography, political science, psychology, and sociology) in interdisciplinary analyses of environmental issues.

The course's content addresses significant environmental issues relating to society's utilization of natural resources, the environmental pollution created by society, and society's efforts to create a more "sustainable" future. Students will read and discuss papers relating to human-environment interactions relating to water and air pollution, mining, forests, food and agriculture, the ozone layer, climate change, and biodiversity. This content is organized around 15 key factors that influence the relationship between society and the environment. These range from micro-level factors such as individual and group perceptions of nature and risk to macro-level factors such as economic growth, technology, and institutions.

The course also introduces a range of important social science concepts, such as collective action problems, scarcity, marginal social costs, commodification, the demographic transition, and common pool resource management. Students are also exposed to a range of both qualitative and quantitative research methods, including surveys, case studies, geographic information systems, experimental designs, observation studies, geographic information systems, cost-benefit analysis and ethnography.

The course includes two written assessments, two field assignments, and a short final essay. It concludes with a discipline-based final paper and an interdisciplinary team-based presentation on a specific environmental issue. Examples of topics covered in past years include tree cover in Charlotte, hydraulic fracking, seafood sourcing, and mountain mining. These two final projects will help students synthesize the knowledge and skills they have gained throughout the semester.

COURSE STRUCTURE

The course is structured into six units, which are organized around the four main themes of the course:

- **Unit I: An Introduction to the Environmental Social Sciences**
 - The Anthropocene, the Social Sciences, and Interdisciplinarity
- **Unit II: From Minds to Markets:**
 - Environmental Health, Biophilia, Environmental Risk, Environmental Values, Tragedies of the Commons, Negative Environmental Externalities, Economic Growth
- **Unit III: From Norms to Negotiations: Cultural, Social, and Political Factors**
 - Culture, Environmental Justice, Population, Technology, Knowledge, Power, Institutions, Coalitions, Scale
- **Unit IV: Synthesis – The Environmental Social Sciences in the Real World**
 - Team Presentations and Papers Relating to a Specific Environmental Problem

COURSE MATERIALS

Instead of textbooks, the course has been developed around the series of readings listed in the course outline below. Links to the readings, either through databases available in the library or posted in .pdf format, are available on the ENV 202 site in the Moodle course management system. In some instances, concepts will be introduced using videos and materials available online rather than through traditional articles and textbooks. These online resources are integral to the course and should be treated as such. While every effort will be made to ensure that the links on Moodle are available and current, it is ultimately the student's responsibility to access academic resources through the Davidson Library website. Please contact the reference librarians if you are having difficulty. Students are encouraged to print the articles double-sided and bring them to class to discuss.

COURSE REQUIREMENTS AND POLICIES

In order to assess student learning and achievement of the objectives listed above, students will complete a variety of assignments during the course. Grading in this course will follow the system outlined in the Davidson Catalog and consist of the following components:

1. **Participation (15%):** This course is designed for active student involvement and participation. Participation grades will be based on students' preparation for class, careful attention to assigned readings, engagement with relevant current events, quality of contributions, respect for the ideas and remarks of others in the class, the relevance of those remarks, and your overall level of participation (both active and passive) in the classroom. I may call on individual students to discuss the key insights of particular articles.
2. **Field Assignments (20% total, 10% each):** Students will complete two field assignments using standard social science research methods. The first assignment will use a deductive, quantitative approach while the second assignment will involve an inductive, qualitative approach. These field assignments will require students to conduct interviews either on or off campus with Davidson employees, community members, and other students. Further guidance and instructions for these assignments will be provided later in the course.
3. **Unit Assessments (30% total, 15% each):** Students will complete two assessments over the course of the semester. The first assessment will cover the information and concepts included in Units I-III while the second assessment will cover the information and concepts included in Unit IV. The assessments will include both writing components (essays and short answers) and shorter identifications. The essays will be written in several different formats, including short policy memos and research proposals.
4. **Final Paper (17.5%, Individual-Based):** Students will complete a 5-7 page final paper (double-spaced)

on one of six specific environmental issues from the perspective of one of six social sciences (e.g. economics, anthropology, political science, psychology, geography, sociology). For these papers, students will conduct a systematic and rigorous review of past research on the topic, and will analyze the contributions and limitations of that research. This assignment includes an annotated bibliography, research log, and outline of the paper, which are due several weeks before the final paper.

5. **Final Presentation (12.5%, Team-Based):** Once these papers are complete, students who worked on the same topics will form teams that will design and present a group presentation on their topic. Students will share their papers within their teams, and work together to develop an interdisciplinary analysis of their issue. The final presentations will summarize the insights of the relevant social science literature and provide policy recommendations based on that research. These presentations should successfully integrate the insights of discipline-based research with an interdisciplinary understanding of the issue. Each student will be responsible for presenting a relatively equal percentage of their team's presentation.
6. **Final Essay (5%):** Students will submit a final essay describing the social sciences and the strengths and limitations of different ways of bringing them together to analyze the relationship between society and the environment.

Campus Presentations: Extra credit opportunities will be available for students who attend guest lectures on campus that are relevant to the course. To qualify for the extra credit, students will write short (1 page) response papers discussing the lecture's insights. Such opportunities will be announced in class.

Current Events: In order to encourage students to be applying what they learn in the classroom to events happening in the real world, every week at least five minutes will be dedicated to discussing current events in environmental affairs. Students are expected to sign up for at least one regular email newsletter relating to the environment, such as Grist.org, the Environmental News Network (enn.com), Treehugger.com, GreenBiz.com, etc. As part of class participation, students will be regularly asked to relate current developments in environmental affairs to one of the concepts discussed in the course.

COURSE OUTLINE AND READINGS

The course outline below lists the topics we will cover each day and week of the semester, and includes the readings associated with each topic. With the exception of the first day of the course, students should read these materials before the class for which they are assigned and be prepared to discuss them. For your convenience and planning purposes, each reading's approximate number of pages in parentheses after the bibliographic information has been included below. Readings average approximately 45 pages per class (or approximately 90 pages per week), although this will vary to some extent by day and by week. Keep in mind that the materials will also vary in their difficulty and density, and some may take more time to read than the average text while others will take less time to read. While much of the materials below contribute to several learning outcomes, I have classified each reading or video in three categories: "Discipline in Focus," "Method in Focus," and "Factor in Focus." These categories correspond to Learning Outcomes 1, 2, and 4. Relevant theories and concepts (Learning Outcome 3) are discussed throughout the materials.

Important Note: I reserve the right to make modifications to the information below if in my judgment the flow of the course is best served by such adjustments.

Unit I: An Introduction to the Social Sciences and the Environment

August 23: *The Anthropocene and the Environmental Social Sciences* (2)

“Welcome to the Anthropocene.” *The Economist*, 26 May 2011. (2) <http://www.economist.com/node/18744401>

August 25: *Disciplinary, the Social Sciences, and the Environment* (26)

Keith Kerr. 2008. “Social Science.” *International Encyclopedia of the Social Sciences*. Ed. William A. Darity, Jr., Vol. 7., 614-618 (6). Search at this address:
<http://go.galegroup.com.ezproxy.lib.davidson.edu/ps/i.do?id=GALE%7C1PAV&v=2.1&u=nclivedc&it=aboutBook&p=GVRL&sw=w>

Vaccaro, Ismael, Eric Alden Smith, and Shankar Aswani. 2010. “Introduction.” *Environmental Social Sciences: Methods and Research Design*. Cambridge: Cambridge University Press, 1-9 (9). [Available on Moodle](#)

Palsson, Gisli, Bronislaw Szerszynski, Sverker Sörlin, John Marks, Bernard Avril, Carole Crumley, Heide Hackmann, et al. 2013. “Reconceptualizing the ‘Anthropos’ in the Anthropocene: Integrating the Social Sciences and Humanities in Global Environmental Change Research.” *Environmental Science & Policy*, Special Issue: Responding to the Challenges of our Unstable Earth (RESCUE), 28 (April): 3–13. doi:10.1016/j.envsci.2012.11.004. [Available on Moodle](#)

August 30: *Interdisciplinarity, Transdisciplinarity, and the Environment* (43)

Repko, Allen F. 2012. *Mapping the Drivers of Interdisciplinarity. Interdisciplinary Research Process and Theory*, 2nd Edition. Thousand Oaks, California: Sage Publications, Inc., 32-66 (33).
http://www.sagepub.com/upm-data/43243_2.pdf

Jahn, Thomas, Matthias Bergmann, and Florian Keil. 2012. “Transdisciplinarity: Between Mainstreaming and Marginalization.” *Ecological Economics* 79(0): 1–10 (10). [Available on Moodle](#)

Roleplaying Exercise Preparation

Unit II: From Minds to Markets: Psychological and Economic Factors

September 1: *Environmental Health* (38)

DIF: Steg, Linda, Agnes E. van den Berg, and Judith I. M. de Groot. 2012. “Environmental Psychology: History, Scope and Methods.” In *Environmental Psychology: An Introduction*, John Wiley & Sons, p. 1–10 (10). [Available on Moodle](#)

MIF: Remler, Dahlia K., and Gregg G. Van Ryzin. 2010. *Research Methods in Practice: Strategies for Description and Causation*. “Research in the Real World.” SAGE Publications: 1-21 (21). [Available on Moodle](#)

FIF: Van den Berg, Agnes E. et al. 2012. “Health Benefits of Nature.” In *Environmental Psychology: An Introduction*, John Wiley & Sons, p. 48-54 (7). [Available on Moodle](#)

Field Assignment #1 (Deductive) Distributed

September 6: *Biophilia* (42)

FIF: Kellert, Stephen R. 1993. “The Biological Basis for Human Values of Nature.” In *The Biophilia Hypothesis*, Washington, DC: Island Press, p. 42-66 (24). [Available on Moodle](#)



- MIF: Mayer, F. Stephan, and Cynthia McPherson Frantz. 2004. "The Connectedness to Nature Scale: A Measure of Individuals' Feeling in Community with Nature." *Journal of Environmental Psychology* 24 (4): 503–507, 512–13 (9). http://gse.cat.org.uk/downloads/connectedness_to_nature_paper.pdf
- MIF: Mayer, F. S., C. M. Frantz, E. Bruehlman-Senecal, and K. Dolliver. 2009. "Why Is Nature Beneficial?: The Role of Connectedness to Nature." *Environment and Behavior* 41(5): 607–21 (14). https://www.researchgate.net/profile/Cynthia_Frantz/publication/238428905_Why_Is_Nature_Beneficial?he_Role_of_Connectedness_to_Nature/links/543be72c0cf204cab1db5017.pdf

September 8: Environmental Risk (40)

- DIF: Swim, Janet K. et al. 2011. "Psychology's Contributions to Understanding and Addressing Global Climate Change." *American Psychologist* 66(4): 241–249 (8). <https://ezproxy.lib.davidson.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=pdh&AN=amp-66-4-241&site=ehost-live>
- FIF: Böhm, Gisela and Carmen Tanner. 2012. "Environmental Risk Perception." In *Environmental Psychology: An Introduction*, John Wiley & Sons, p. 15-24 (9). [Available on Moodle](#)
- FIF: Böhm, Gisela. 2003. "Emotional Reactions to Environmental Risks: Consequentialist versus Ethical Evaluation." *Journal of Environmental Psychology* 23 (2): 199–212. [Find using library website.](#)

September 13: Environmental Values (40)

- FIF: Steg, Linda and Annika Nordlund. 2012. "Models to Explain Environmental Behavior." In *Environmental Psychology: An Introduction*, John Wiley & Sons, p. 185-193 (9). [Available on Moodle](#)
- FIF: de Groot, Judith I. M. and John Thøgersen. 2012. "Values and Pro-Environmental Behavior." In *Environmental Psychology: An Introduction*, John Wiley & Sons, p. 141-150 (10). [Available on Moodle](#)
- FIF: Gifford, Robert. 2011. "The Dragons of Inaction: Psychological Barriers that Limit Climate Change Mitigation and Adaptation." *American Psychologist* 66(4): 290–302 (9). <https://ezproxy.lib.davidson.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=pdh&AN=amp-66-4-290&site=ehost-live>
- MIF: Grunert, Klaus G., Sophie Hieke, and Josephine Wills. 2014. "Sustainability Labels on Food Products: Consumer Motivation, Understanding and Use." *Food Policy* 44 (February): 177–89 (12). <http://www.sciencedirect.com/science/article/pii/S0306919213001796%20-%20t0030#>



September 15: The Tragedy of the Commons (35 + 7 min)

- DISCIPLINE-IN-FOCUS: Backhouse, Roger. E, and Steven G. Medema. 2009. "On the Definition of Economics." *Journal of Economic Perspectives* 23, no. 1: 221-233. (12) <http://www.jstor.org.ezproxy.lib.davidson.edu/stable/27648302>
- FACTOR-IN-FOCUS: Hardin, Garrett. 1968. "The Tragedy of the Commons." *Science* 162(3859): 1243-1248. (6) <http://www.ese.u-psud.fr/epc/conservation/PDFs/hardin.pdf>.
- FACTOR-IN-FOCUS: Khan, Sal. *Tragedy of the Commons*, n.d. <https://www.khanacademy.org/economics-finance-domain/microeconomics/consumer-producer-surplus/externalities-topic/v/tragedy-of-the-commons>. (6:38)
- FACTOR-IN-FOCUS: Costanza, Robert, et al. 1997. "The Value of the World's Ecosystem Services and Natural Capital." *Nature* 387(6230): 255-259. (5) <http://www.nature.com.ezproxy.lib.davidson.edu/nature/journal/v387/n6630/pdf/387253a0.pdf>
- METHOD-IN-FOCUS: Ohler, Adrienne M., and Sherrilyn M. Billger. 2014. "Does Environmental Concern Change the Tragedy of the Commons? Factors Affecting Energy Saving Behaviors and Electricity Usage."

Ecological Economics 107: 1–12 (12). <http://web.colby.edu/joules-to-dollars/files/2015/02/ElectricityTrgdyCmnsEE2014.pdf>

FIELD ASSIGNMENT #1 (DEDUCTIVE) DUE ON FRIDAY, SEPTEMBER 16 @ 5 PM

September 20: Negative Environmental Externalities (45 + 12 min)

- DIF: Ruff, Larry E. 1970. “The Economic Common Sense of Pollution.” *The Public Interest* 19: 69–85. (16) http://www.nationalaffairs.com/doclib/20080522_197001906theeconomiccommonsenseofpollutionlarryeruff.pdf
- FIF: Aslanbeigui, Nahid., and Steven G. Medema. 1998. “Beyond the Dark Clouds: Pigou and Coase on Social Cost.” *History of Political Economy* 30(4): 601–610. (10) <http://hope.dukejournals.org/content/30/4/601.short>
- FIF: Khan, Sal. *Negative Externalities*, n.d. <http://www.khanacademy.org/finance-economics/microeconomics/v/negative-externalities>. (6:00)
- FIF: Khan, Sal. *Taxes for Factoring in Negative Externalities*, n.d. <http://www.khanacademy.org/finance-economics/microeconomics/v/taxes-for-factoring-in-negative-externalities>. (5:45)
- MIF: Environmental Protection Agency. 2011. *Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards*. “Executive Summary.” ES-1 – ES-19 (19). <http://www.epa.gov/mats/pdfs/20111221MATSfinalRIA.pdf>



September 22: Economic Growth (34)

- FIF: Dasgupta, Susmita et al. 2002. “Confronting the Environmental Kuznets Curve.” *The Journal of Economic Perspectives* 16(1): 147–164. (18) <http://www.jstor.org/stable/2696580>
- FIF: Daly, Herman E. 2005. “Economics in a Full World.” *Scientific American* 293(3): 100–107. (8) <https://ezproxy.lib.davidson.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=17836492&site=ehost-live>
- MIF: Culas, Richard J. 2012. “REDD and Forest Transition: Tunneling Through the Environmental Kuznets Curve.” *Ecological Economics* 79: 44–51. (8) **Available on Moodle**

Final Paper and Presentation Assignment Distributed

September 27: Review Session

September 29: ASSESSMENT #1

Assessment #1 Distributed Online on Thursday, September 29 @ 3 PM
ASSESSMENT #1 DUE ON FRIDAY, SEPTEMBER 30 @ 5 PM

Unit III: From Norms to Negotiations: Cultural, Social, and Political Factors

October 4: Culture (50)

- DIF: Orr, Yancey, J. Stephen Lansing, and Michael R. Dove. 2015. “Environmental Anthropology: Systemic Perspectives.” *Annual Review of Anthropology* 44:153-163 (11). http://www.slansing.org/uploads/4/3/4/1/43417789/environmental_anthropology_systemic_perspectives.pdf



MIF: Rapley, Tim. 2004. "Interviews." In *Qualitative Research Practice*, Thousand Oaks, CA: SAGE. 15-34 (16). [Available on Moodle](#)

MIF: Kumar, Ranjit. 2010. *Research Methodology: A Step-by-Step Guide for Beginners*. Third Edition. SAGE Publications Ltd. 155-161 (6). [Available on Moodle](#)

FIF: Lind, David, and Elizabeth Barham. 2004. "The Social Life of the Tortilla: Food, Cultural Politics, and Contested Commodification." *Agriculture and Human Values* 21(1): 47-58 (12).

<http://ezproxy.lib.davidson.edu/login?url=http://search.proquest.com/docview/214182759?accountid=10427>

MIF: Snipes, Shedra Amy, Beti Thompson, and Kathleen O'Connor. 2009. "'Pesticides Protect the Fruit, but Not the People': Using Community-Based Ethnography to Understand Farmworker Pesticide-Exposure Risks." *American Journal of Public Health* 99: S616-21 (5).

<https://ezproxy.lib.davidson.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ssf&AN=509051437&site=ehost-live>

Field Assignment #2 (Inductive) Distributed



October 6: Environmental Justice (58)

FIF: Mohai, Paul, David Pellow, and J. Timmons Roberts. 2009. "Environmental Justice." *Annual Review of Environment and Resources* 34(1): 405-426 (22).

<http://www.annualreviews.org.ezproxy.lib.davidson.edu/action/doSearch?startPage=0&pageSize=20&sortBy=relevancy&text1=Environmental%20Justice&field1=title&filterByPub=all&dateFilterSelect=Year&Year=2009>

MIF: Bullard, Robert D. 2000. "Dispute resolution and toxics: Case studies." In *Dumping In Dixie: Race, Class, And Environmental Quality, Third Edition*, Westview Press, p. 37-66 (30). [Available on Moodle](#)

MIF: Norton, Jennifer M. et al. 2007. "Race, Wealth, and Solid Waste Facilities in North Carolina." *Environmental Health Perspectives* 115(9): 1344-1350 (6).

<https://ezproxy.lib.davidson.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=8gh&AN=26996798&site=ehost-live>

FALL BREAK

October 13: Population (44)

DIF: Lockie, Stewart. 2015. "Why Environmental Sociology?" *Environmental Sociology* 1(1): 1-3 (3). <http://www.tandfonline.com/doi/pdf/10.1080/23251042.2015.1022983>

DIF: Pellow, David N., and Hollie Nyseth Brehm. 2013. "An Environmental Sociology for the Twenty-First Century." *Annual Review of Sociology* 39(1): 229-44 (15).

<http://www.annualreviews.org.ezproxy.lib.davidson.edu/doi/pdf/10.1146/annurev-soc-071312-145558>

FIF: UN Population Fund. 2014. "State of the World Population 2014 - Press Summary."

http://www.unfpa.org/sites/default/files/resource-pdf/EN-SWOP%20EX%20SUM-Final-web_0.pdf (18).

FIF: Gerland, P et al. 2014. "World Population Stabilization Unlikely This Century." *Science* 346(6206): 234-37 (4). <http://www.sciencemag.org.ezproxy.lib.davidson.edu/content/346/6206/234.full.pdf>.

FIF: "Population and Sustainable Development in the Post-2015 Agenda." *UNFPA - United Nations Population Fund*. <http://www.unfpa.org/publications/population-and-sustainable-development-post-2015-agenda>, 1-4 (4).

October 18: Technology (49)

FIF: Mitchell, Ronald B. 2012. "Technology Is Not Enough Climate Change, Population, Affluence, and Consumption." *The Journal of Environment & Development* 21(1): 24–27 (3).

<http://jed.sagepub.com.ezproxy.lib.davidson.edu/content/21/1/24>

FIF: Visser, Wayne. 2014. "How to Use Technology to Make Our Planet More Sustainable, Not Less." *The Guardian* (2).

<http://www.theguardian.com/sustainable-business/technological-innovation-sustainability-energy-green-investment>

FIF: Vergragt, Philip. 2006. *How Technology Could Contribute to a Sustainable World*. Tellus Institute. 1-25 (25).

http://www.greattransition.org/archives/papers/How_Technology_Could_Contribute_to_a%20Sustainable_World.pdf

FIF: Jacobsen, Sven-Erik, Marten Sørensen, Søren Marcus Pedersen, and Jacob Weiner. 2013. "Feeding the World: Genetically Modified Crops versus Agricultural Biodiversity." *Agronomy for Sustainable Development* 33(4): 651-660 (10). http://www.jacobweiner.dk/site/Publications_files/Jacobsen_S-E_et_al_2013.pdf

MIF: Kleppin, Lukas, Gunther Schmidt, and Winfried Schröder. 2011. "Cultivation of GMO in Germany: Support of Monitoring and Coexistence Issues by WebGIS Technology." *Environmental Sciences Europe* 23(4): 1-9 (9). <http://www.enveurope.com/content/pdf/2190-4715-23-4.pdf>



October 20: Knowledge (21)

FIF: Fairhead, James, and Melissa Leach. 1995. "False Forest History, Complicit Social Analysis: Rethinking Some West African Environmental Narratives." *World Development*: 1023–35 (11).

MIF: Raymond, Christopher M. et al. 2010. "Integrating Local and Scientific Knowledge for Environmental Management." *Journal of Environmental Management* 91(8): 1766–77 (10). <http://sustainable-learning.org/wp-content/uploads/2012/01/Integrating-local-and-scientific-knowledge.pdf>

ANNOTATED BIBLIOGRAPHY AND PAPER OUTLINE DUE ON FRIDAY, OCT. 21 @ 5 PM

October 25: Power (53)

DIF: Grigsby, Ellen. 2008. "Key Concepts in Political Science." *Analyzing Politics: An Introduction to Political Science*. Cengage Learning, 12-18, 42-58. (22) [Available on Moodle](#)

FIF: Ribot, Jesse C. 1998. Theorizing Access: Forest Profits along Senegal's Charcoal Commodity Chain. *Development and Change* 29(2): 307-338. (31)

<https://ezproxy.lib.davidson.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=3253238&site=ehost-live>



October 27: Institutions (46)

FIF: Evans, James. 2012. "Introduction." In *Environmental Governance*, London and New York: Taylor & Francis, p. 1-14. (14) [Available on Moodle](#)

FIF: Evans, James. 2012. "Institutions, rules, and actors." In *Environmental Governance*, London and New York: Taylor & Francis, p. 45–76. (32) [Available on Moodle](#)

FIELD ASSIGNMENT #2 (INDUCTIVE) DUE ON FRIDAY, OCTOBER 28 @ 5 PM

November 1: Coalitions (31)

- DIF: Kraft, Michael and Scott Furlong. 2010. "Understanding Public Policymaking." In *Public Policy: Politics, Analysis, and Alternatives*, 3rd Edition, 72-87 (15). [Available on Moodle](#)
- FIF: Knox-Hayes, Janelle. 2012. "Negotiating Climate Legislation: Policy Path Dependence and Coalition Stabilization." *Regulation & Governance* 6 (4): 545-561 (16).
<http://web.b.ebscohost.com/ehost/detail/detail?vid=2&sid=c9712b-5a9f-4ba1-a73a-07d2a86072d5%40sessionmgr115&hid=101&bdata=JnNpdGU9ZWhvc3QtG1Z2ZQ%3d%3d#AN=1362890&db=ecn>

November 3: Scale (36)

- DIF: Hansen, Teis, and Lars Coenen. 2014. "The Geography of Sustainability Transitions: Review, Synthesis and Reflections on an Emergent Research Field." *Environmental Innovation and Societal Transitions* 2-22 (21). <http://linkinghub.elsevier.com/retrieve/pii/S2210422414000835>.
- FIF: Budds, Jessica, and Leonith Hinojosa. "Restructuring and Rescaling Water Governance in Mining Contexts: The Co-Production of Waterscapes in Peru." *Water Alternatives* 5, no. 1 (February 2012): 119-134 (15). http://oro.open.ac.uk/32484/1/Art5-1-8_Budds-Hinojosa_Published.pdf
- Roleplaying Exercise Preparation**

November 8: Review Session

November 10: ASSESSMENT #2

Assessment #2 Distributed Online on November 10 @ 3 PM
ASSESSMENT #1 DUE ON FRIDAY, NOVEMBER 11 @ 5 PM

Unit IV: Synthesis – From Disciplinarity to Multidisciplinarity and Beyond

November 15: The Environmental Social Sciences in the Real World (Part I)

Team Meetings

FINAL PAPER DUE IN CLASS (HARD COPIES FOR TEAM MEMBERS AND PROFESSOR)

November 17: The Environmental Social Sciences in the Real World (Part II)

Team Meetings

November 22:

Team Meetings

November 24: THANKSGIVING BREAK

December 1: PRESENTATIONS

December 3: PRESENTATIONS

RESEARCH LOGS DUE IN CLASS

December 8: Synthesis and Evaluations

FINAL ESSAY DUE IN CLASS