

CSUS 824
Sustainable Development: Measuring Socioeconomic Well-Being

Spring 2022

DAYS AND TIMES Wednesday, 3:00 – 5:50pm

LOCATION Berkey Hall 211A

INSTRUCTOR “M.O.” Olabisi

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COURSE RESOURCES <http://d2l.msu.edu>

TELEPHONE

Department: 353-5190

OFFICE Natural Resources

OFFICE HOURS Wednesdays, 2:00pm – 3:00pm (or by appointment)

COURSE DESCRIPTION

We will explore the balance between our concern for immediate human needs and our care for nature in this course. To do so, we will use tools that weigh the impacts of human demands on nature, against the regenerative capacity of the planet. This graduate course emphasizes the challenges of environmental sustainability in the context of global economic development. We will review the principles of sustainable development in theory and practice, with a focus on the measurement of social and economic welfare at national and local scales. The course will examine the extensive literature and policy frameworks associated with conventional notions of sustainable development along with divergent concepts and models that challenge mainstream thinking. Drawing on research from the fields of sustainability science, and economics, we will examine traditional and alternative indicators of sustainable development, including the social, economic, and environmental dimensions of human well-being. Students will apply their understanding of sustainability indicators in a specific developmental and environmental context related to their interests. The course will include theoretical and empirical readings, reflective discussions and essays, and planning for data sourcing and analysis for the calculation of sustainability indicators.

COURSE OBJECTIVES

Students in this course will be challenged to understand environmental sustainability in the context of social and economic development and to describe the role of natural resources and the environment in human welfare. Specifically, students will:

- Understand the range of established social welfare indicators, and understand the shortcomings of consumption and economic growth as measures of socioeconomic well-being;
- Examine alternative indicators of well-being that consider the effects of social capital, natural capital, and the equitable distribution of income, and be able to describe their advantages and the challenges in their implementation;
- Distinguish between ideas associated with mainstream sustainable development and alternative ideologies that challenge conventional thinking and popular assumptions about progress;
- Examine the origins of thinking about sustainability and sustainable development; and

- Apply their knowledge about sustainable development in a sustainability assessment of some system that depicts the reality of social, environmental, and economic conditions in some geographic or institutional context of their interests (such as a rural or urban area, region, country, policy, or organization). Students interested in international development may choose to develop an analysis of socioeconomic welfare in a developing country context.

REQUIRED TEXTS Adams, W. M. 201X. *Green Development: Environment and Sustainability in a Developing World*, 4th^d edition. New York: Routledge.

I plan to have a copy on reserve at the library.

OTHER READINGS Additional reading assignments will be placed on the course website on Desire2Learn, which can be accessed at <http://d2l.msu.edu>.

RESOURCES

Global development indicators:

Millennium Development Goals Indicators Dashboard: <http://mdgs.un.org/unsd/mdg/>

Millennium Ecosystem Assessment: <http://www.millenniumassessment.org/>

Human Development Report: <http://hdr.undp.org>

Standardized World Income Inequality Database: <http://myweb.uiowa.edu/fsolt/swiid/swiid.html>

UN Sustainable Development Goals: <https://sustainabledevelopment.un.org/?menu=1300>

UN Sustainable Development Knowledge Platform: <http://sustainabledevelopment.un.org/>

UN Sustainable Development Solutions Network: <http://unsdsn.org/>

World Development Indicators (The World Bank): <http://data.worldbank.org/indicator>

Environmental sustainability:

Environmental Sustainability Index: <http://sedac.ciesin.columbia.edu/data/collection/esi/>

Happy Planet Index: <http://www.happyplanetindex.org/>

Living Planet Index: http://wwf.panda.org/about_our_earth/all_publications/living_planet_report

The Economics of Ecosystems and Biodiversity (TEEB): <http://www.teebweb.org/>

Ecological Footprint resources:

Center for Sustainable Economy – Ecological Footprint: <http://myfootprint.org/>

Earth Day Network Footprint Calculator: <http://www.earthday.org/footprint-calculator>

Global Footprint Network: <http://www.footprintnetwork.org/>

Social sustainability:

Gender Inequality Index: <http://hdr.undp.org/en/content/gender-inequality-index-gii>

Environment Gender Index: <http://genderandenvironment.org/resource/the-environment-gender-index/>

UN HDR Gender empowerment measure: <https://www.rrojasdatabank.info/hdr20072008tab29.pdf>

Organizations and institutes:

International Institute for Sustainable Development: <https://www.iisd.org/>

Schumacher Center for a New Economics: <https://centerforneweconomics.org/>

The Next System Project: <https://thenextsystem.org/>

Government resources:

Australia – Sustainable Communities: <http://www.environment.gov.au/sustainable-communities>

Bhutan – Gross National Happiness: <http://www.grossnationalhappiness.com/>

Canadian Environmental Sustainability Indicators: <http://www.ec.gc.ca/indicateurs-indicators/>

Michigan Dashboard: <https://www.michigan.gov/dashboard>

U.K. Indicators: <https://www.gov.uk/government/collections/sustainable-development-indicators>

U.S. Environmental Protection Agency – Sustainability: <http://www.epa.gov/sustainability/>

Index of Sustainable Economic Welfare and Genuine Progress Indicator resources:

Genuine Economic Progress in the United States: <https://www.uvm.edu/gund/gpi>

Business, institutions, and sustainable development:

AASHE Sustainability Tracking, Assessment & Rating System <https://stars.aashe.org/>

Dow Jones Sustainability Indices: <https://www.sustainability-indices.com/about-us/>

The Natural Step: <http://www.naturalstep.org>

World Business Council for Sustainable Development (WBCSD): <http://www.wbcsd.org>

ACADEMIC INTEGRITY

Academic integrity is a fundamental value of higher education at any institution of higher education; therefore, acts of cheating, plagiarism, falsification or attempts to cheat, plagiarize or falsify will not be tolerated. Please see [MSU Regulations, Ordinances and Policies Regarding Academic Honesty and Integrity](#), which includes the University policy on [Plagiarism](#). The Graduate School has assembled a guide to resources for responsible conduct of research, scholarship, and creative activities, which is available at [Research Integrity](#). The University policy on academic dishonesty is provided in the [Student Handbook and Resource Guide](#), which also provides a summary of [Graduate Student Rights and Responsibilities](#).

[Article 2.III.B.2](#) of *Student Rights and Responsibilities* states: “The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards.” In addition, the Department of Community Sustainability adheres to the policies on academic honesty specified in General Student Regulation 1.0, [Protection of Scholarship and Grades](#); the all-University Policy on [Integrity of Scholarship and Grades](#); and [Ordinance 17.00](#), Examinations. Students are expected to develop original work for this course; therefore, you may not submit course work you completed for another course to satisfy the requirements for this course. Students who violate MSU regulations on Protection of Scholarship and Grades will receive a failing grade in the course or on the assignment.

Michigan State University is committed to ensuring that the bereavement process of a student who loses a family member during a semester does not put the student at an academic disadvantage in their classes. If you require a grief absence, you should complete the [Grief Absence Request Form](#) no later than one week after knowledge of the circumstance. Appropriate accommodations will be taken in the case of a verified grief absence, so that students that you are not penalized due to a verified grief absence.

ASSESSMENT AND EVALUATION

Course Preparation, Check-Ins and Participation

The framework of the course assumes that learning takes place best in an interactive and critical atmosphere. Accordingly, the course relies heavily on reflection, critical thinking, discussion, and active student participation. The format emphasizes structured opportunities for students to share and reflect upon their individual experiences. All students are expected to regularly attend class, arrive on time, complete the assigned readings before each class meeting, and actively participate in class discussions. We will measure student participation by the quality of contributions to class discussions, the quality of interactions with one other—both in class and online, as well as responses to the 10 check-in exercises on D2L. The check-ins will be 5-question quizzes, designed to be completed in 2 minutes, administered through D2L that serve primarily to take class attendance, and secondarily to check that students have met the most basic level of understanding for the class materials.

Topical Presentation (1)

Each student will give a brief presentation on one issue related to a particular week’s readings and course topic. The presentation topic can draw on the student’s own research interests but should be related to the week’s course topic. Presentations should be approximately five (5) minutes in length, but no more than seven (7) minutes, allowing 2-3 minutes for questions and discussion. Good presentations will introduce questions or arguments that stimulate discussion. Presentations will be assessed on the level of organization, the clarity of the discussion points, and the factual relevance to the assigned reading.

Weekly Notes (8)

In preparation for weekly in-class discussions and exercises, each student is expected to prepare a thoughtful and critically reflective statement related to the week's reading assignments (at least eight (8) weekly reflections over the course of the semester). In addition, each student is expected to comment on the reflections of other classmates (at least eight (8) responses over the course of the semester). Reflections should be approximately 600-1000 words in length and should clearly demonstrate that you have read all the required readings. Reflections are due on the course D2L (<https://d2l.msu.edu>) by 5:00pm three days before class (i.e., Sundays), and responses are due by 5pm on the day before class (Tuesdays). Responses are expected to be about 100 words. All are expected to read the statements from classmates prior to class and respond with observations or comments on what you find interesting, controversial or useful in the readings and in other reflections. The statements should help to set the agenda for in-class discussions.

Reflection Papers (3)

Students will write three essays with their own reflections about course topics, as directed in the assignments. Papers should be analytical and reflective, drawing upon relevant theory and course concepts as appropriate, and addressing the topic from multiple perspectives. Remember that a reflective essay is a form of writing that examines and observes the progress of the writer's individual experience. Reflective essays are based upon your own experiences, so it is expected that you write about yourself, your ideas, reactions, and opinions, as well as about your own understanding of concepts from the course. You might consider providing examples of quotations from an article (or other sources) that demonstrate a point, such a comparison with another written argument or commonly held notion, or to highlight points with which you may agree or disagree. These papers must follow an accepted academic writing style, with all ideas from the literature cited properly. The papers should be free of spelling and grammatical mistakes. At least one of the reflection papers must be coauthored with another student in the class. The reflection papers are due on the 2nd day of Feb, March and April.

Sustainability Assessment

Students can work alone, or in groups of two or three to prepare a sustainability assessment of a specific process that is of interest to you as a scholar-practitioner. (You are trying to frame and answer a question like – “How sustainable is sea freight?” or “Should we rethink restaurants?”). The assignment allows a lot of leeway in selecting a process to assess for sustainability. The point is to help guide a process of inquiry and action for applying the concept of sustainability to complex resource problems in a defined geography, or complex social problems in a defined domain. The assessment will involve the definition and characterization of the system and its drivers, the identification of key stakeholders, and an understanding of the scale at which governance processes work. A full description of the assignment is provided on D2L. The essay is due on D2L at 1pm on April 27.

ASSESSMENT

Course preparation and participation 10%
Topical presentation (1) 10%
Weekly notes (at least 8) 20%
Reflection papers (3 @ 10%) 30%
Sustainability assessment 20%

Final course grades will be assessed according to the following scale:

<i>Grade</i>	4.0	3.5	3.0	2.5	2.0	1.5	1.0	0.0
<i>Average</i>	93-100%	88-92%	83-87%	78-82%	73-77%	68-72%	63-67%	< 63%

COURSE SCHEDULE AND TOPICS

Week 1 January 12, 2022 Course introduction

Required:

Rees, W.E. & Westra, L. (2003) When Consumption Does Violence. Agyeman, J., Bullard, R.B. & Evans, B.(eds) Just sustainabilities: Development in an unequal world

Agboola, T. & Alabi, M. (2003) Political Economy of Petroleum Development, Environmental Injustice and Selective Victimization: A Case Study of the Niger Delta Region of Nigeria. Agyeman, J., Bullard, R.B. & Evans, B.(eds) Just sustainabilities: Development in an unequal world

Recommended:

Schumacher, E. F. (1973). *Small Is Beautiful: Economics as if People Mattered*. London: Blond & Briggs Ltd. Chapters 3 ("The Role of Economics") and 4 ("Buddhist Economics").

Silver, Marc. (2021). Memo to People of Earth: 'Third World' Is an Offensive Term! *National Public Radio* (www.npr.org), [link](#).

Week 2 January 19, 2022 Sustainability

Required:

Adams, W. M. (2019). Green Development, Ch. 1: The dilemma of sustainability

Adams, W. M. (2019). Green Development, Ch. 2: The roots of sustainable development

Daly, H. E. (1990). Toward some operational principles of sustainable development. *Ecological Economics* 2: 1-6.

Recommended:

Costanza, Robert & Bernard C. Patten. (1995). Defining and predicting sustainability. *Ecological Economics* 15: 193-196.

Orr, David W. (2002.) Four challenges of sustainability. *Conservation Biology* 16(6): 1457-1460.

Week 3 January 26, 2022 Sustainable development

Required:

Dietz, T., E. A. Rosa, and R. York. (2009). Efficient Well-Being: Rethinking Sustainability as the Relationship between Human Well-being and Environmental Impacts. *Human Ecology Review* 16(1): 114-123.

Heal, Geoffrey. (2012). Reflections—Defining and measuring sustainability. *Review of Environmental Economics and Policy* 6(1): 147-163.

Recommended:

Parris, Thomas W. and Robert W. Kates. (2003). Characterizing and measuring sustainable development. *Annual Review of Environment and Resources* 28: 559-586.

Pearce, D. W., Atkinson, G. D., & Dubourg, W. R. (1994). The economics of sustainable development. *Annual Review of Energy and the Environment* 19(1): 457-474.

Week 4 February 2, 2022 Mainstream sustainable development

Note: Reflection Paper 1 due today

Required:

Adams, W. M. (2019). Green Development, Ch. 3: Mainstream sustainable development

Arrow et al., (1995). Economic growth, carrying capacity, and the environment. *Science* 268(5210): 520-521.

Lawn, Philip A. (2003). A theoretical foundation to support the Index of Sustainable Economic Welfare (ISEW), Genuine Progress Indicator (GPI), and other related indexes. *Ecological Economics* 44: 105-118.

Stern, David I. (2004). The rise and fall of the Environmental Kuznets Curve. *World Development* 32(8): 1419–1439.

Recommended:

Munasinghe, Mohan. (1999). Is environmental degradation an inevitable consequence of economic growth: Tunneling through the Environmental Kuznets Curve. *Ecological Economics* 29: 89–109.

Pearce, David, Kirk Hamilton, and Giles Atkinson. (1996). Measuring sustainable development: Progress on indicators. *Environment and Development Economics* 1: 85-101.

Week 5 February 9, 2022 Sustainability and natural capital

Required:

Adams, W. M. (2019). Green Development, Ch. 4: Sustainability and Natural Capital

Ayres, Robert, Jeroen van den Berrgh, & John Gowdy. (2001). Strong versus weak sustainability: Economics, natural sciences, and consilience. *Environmental Ethics* 23(2): 155-168.

Costanza, R., d'Arge, R., De Groot, R., Faber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R.V., Paruelo, J., Raskin, R.G., Sutton, P., and van den Belt, M. (1997). The value of the world's ecosystem services and natural capital. *Nature* 387: 253-260.

Dietz, Thomas, Eugene A. Rosa, & Richard York. (2007). Driving the human ecological footprint. *Frontiers in Ecology and the Environment* 5: 13–18.

Fiala, Nathan. (2008). Measuring sustainability: Why the ecological footprint is bad economics and bad environmental science. *Ecological Economics* 67(4): 519-525.

Recommended:

Millennium Ecosystem Assessment. (2005). *Ecosystems and Human Well-being: Synthesis*. Island Press, Washington, DC. Preface and Summary for Decision Makers (pp. v – 24).

Week 6 February 16, 2022 Sustainable development and its discontents

Required:

Adams, W. M. (2019). Green Development, Ch. 7: Sustainability and Degrowth

Guha, Ramachandra. (1989). Radical American environmentalism and wilderness preservation: A third world critique. *Environmental Ethics* 11(1): 71-83.

Hickel, Jason. (2018). Why growth can't be green. *Foreign Policy*, September 12, 2018. <https://foreignpolicy.com/2018/09/12/why-growth-cant-be-green/>.

Rockström, Johan et al. (2009). A safe operating space for humanity. *Nature* 461: 472-475.

Recommended:

Beckerman, W. (1994). Sustainable development: Is it a useful concept? *Environmental Values* 3: 191-209.

Hiss, Tony. (2014). Can the world really set aside half of the planet for wildlife? *Smithsonian Magazine*, September 2014. <http://www.smithsonianmag.com/science-nature/can-world-really-set-aside-half-planet-wildlife-180952379F>

Robinson, John. (2004). Squaring the circle? Some thoughts on the idea of sustainable development. *Ecological Economics* 48: 369-384.

Week 7 February 23, 2022 Happiness and subjective well-being

Required:

Deci, Edward L. & Richard M. Ryan. (2008). Hedonia, eudaimonia, and well-being: an introduction. *Journal of Happiness Studies* 9(1): 1–11.

Di Tella, Rafael & Robert MacCulloch. (2008). Gross national happiness as an answer to the Easterlin Paradox? *Journal of Development Economics* 86: 22-42.

Easterlin, Richard A., Laura Angelescu McVey, Malgorzata Switek, Onnicha Sawangfa, and Jacqueline Smith Zweig. (2010). The happiness–income paradox revisited. *Proceedings of the National Academy of Sciences* 107(52): 22463–22468.

Max-Neef, Manfred. (1995). Economic growth and quality of life: a threshold hypothesis. *Ecological Economics* 15: 115-118.

Recommended:

Frey, Bruno S. & Alois Stutzer. (2002). What can economists learn from happiness research? *Journal of Economic Literature* 40(2): 402-435.

Kelly, Annie. "Gross national happiness in Bhutan: the big idea from a tiny state that could change the world." *The Guardian*, December 1, 2012.

Kristof, Nicholas D. "The happiest people." *The New York Times*, January 7, 2010.

Revkin, Andrew C. "A new measure of well-being from a happy little kingdom." *The New York Times*, October 4, 2005.

Week 8 March 2, 2022 Sustainability, distribution, and inequality

Note: Reflection Paper 2 due today

Required:

Steffen, Will & Mark Stafford Smith. (2013). Planetary boundaries, equity and global sustainability: why wealthy countries could benefit from more equity. *Current Opinion in Environmental Sustainability* 5(3-4): 403-408.

UNDP. (2011). Why sustainability and equity? Chapter 1 from *Sustainability and Equity: A Better Future for All*, Human Development Report 2011, pp. 13-21. New York: United Nations Development Programme.

Wilkinson, Richard G. & Kate E. Pickett. (2009). Income inequality and social dysfunction. *Annual Review of Sociology* 35:493-511.

Recommended:

Bourguignon, François & Christian Morrisson. (2002). Inequality among world citizens: 1820-1992. *The American Economic Review* 92(4): 727-744.

Pasquali, Valentina. (2012). Wealth distribution and income inequality by country. *Global Finance Magazine*: <http://www.gfmag.com/tools/global-database/economic-data/11944-wealth-distribution-income-inequality.html>

Week 9 March 9, 2022 Spring break

Break * no class session *

Week 10 March 16, 2022 Gender, sustainability, and well-being

Required:

Charmes, Jacques & Saskia Wieringa. (2003). Measuring women's empowerment: An assessment of the Gender-related Development Index and the Gender Empowerment Measure. *Journal of Human Development* 4(3): 419-435.

Griggs, David, Mark Stafford-Smith, Owen Gaffney, Johan Rockström, Marcus C. Öhman, Priya Shyamsundar, Will Steffen, Gisbert Glaser, Norichika Kanie & Ian Noble. (2013). Policy: Sustainable development goals for people and planet. *Nature* 495(7441): 305-307.

Meinzen-Dick, Ruth, Chiara Kovarik, and Agnes R. Quisumbing. (2014). Gender and sustainability. *Annual Review of Environment and Resources* 39 (2014): 29-55.

Recommended:

Ewerling, F., Lynch, J. W., Victora, C. G., van Eerdekijk, A., Tyszler, M., & Barros, A. J. (2017). The SWPER index for women's empowerment in Africa: development and validation of an index based on survey data. *The Lancet Global Health*, 5(9), e916-e923.

Week 11 March 23, 2022 Sustainability and intergenerational equity

Required:

Anand, Sudhir & Amartya Sen. (2000). Human development and economic sustainability. *World Development* 28(12): 2029–2049.

Arrow, K., M. Cropper, C. Gollier, B. Groom, G. Heal, R. Newell, W. Nordhaus, R. Pindyck, W. Pizer, P. Portney, T. Sterner, R. S. J. Tol, and M. Weitzman. (2013.) Determining benefits and costs for future generations. *Science* 26 (July 2013): 349-350.

Clark, P., Shakun, J., Marcott, S. et al. (2016) Consequences of twenty-first-century policy for multi-millennial climate and sea-level change. *Nature Clim Change* 6, 360–369.

Recommended:

Broome, John. (2008). The ethics of climate change. *Scientific American* 298(6): 96-102.

Barry, Brian. (1997). Sustainability and intergenerational justice. *Theoria* (1997): 43-64.

Week 12 March 30, 2022 Tools and approaches for sustainable development

Required:

Nelson, E., Mendoza, G., Regetz, J., Polasky, S., Tallis, H., Cameron, D., ... & Lonsdorf, E. (2009). Modeling multiple ecosystem services, biodiversity conservation, commodity production, and tradeoffs at landscape scales. *Frontiers in Ecology and the Environment*, 7(1), 4-11.

Ness, Barry, Evelin Urbel-Piirsalua, Stefan Anderberg, & Lennart Olsson. (2007). Categorising tools for sustainability assessment. *Ecological Economics* 60(3): 498–508.

Reed, Mark S., Evan D.G. Fraser, & Andrew J. Dougill. (2006). An adaptive learning process for developing and applying sustainability indicators with local communities. *Ecological Economics* 59: 406-418.

Recommended:

Folke, Carl. (2006). Resilience: The emergence of a perspective for social–ecological systems analyses. *Global Environmental Change* 16 (2006) 253–267.

Hoogmartens, R., Van Passel, S., Van Acker, K., & Dubois, M. (2014). Bridging the gap between LCA, LCC and CBA as sustainability assessment tools. *Environmental Impact Assessment Review*, 48, 27-33.

Schmitt Olabisi, L.. (2010). The system dynamics of forest cover in the developing world: Researcher versus community perspectives. *Sustainability* 2, 1523-1535.

Van de Kerk, Geurt & Arthur R. Manuel. (2008). A comprehensive index for a sustainable society: The SSI — the Sustainable Society Index. *Ecological Economics* 66: 228–242.

Week 13 April 6, 2022 Environmental degradation and well-being

Note: Reflection Paper 3 due on Friday

Required:

Adams, W. M. 2009. *Green Development*, Ch. 8: Politics of dryland ecology

Foley, J.A., Navin Ramankutty, Kate A. Brauman, Emily S. Cassidy, James S. Gerber, Matt Johnston, Nathaniel D. Mueller, Christine O’Connell, Deepak K. Ray, Paul C. West, Christian Balzer, Elena M. Bennett, Stephen R. Carpenter, Jason Hill, Chad Monfreda, Stephen Polasky, Johan Rockström, John Sheehan, Stefan Siebert, David Tilman & David P. M. Zaks. (2011). Solutions for a cultivated planet. *Nature* 478(7369): 337.

Foley, J.A., DeFries, R., Asner, G.P., Barford, C., Bonan, G., Carpenter, S.R., Chapin, F.S., Coe, M.T., Daily, G.C., Gibbs, H.K. Helkowski, J.H., Holloway, T., Howard, E.A., Kucharik, C.J., Monfreda, C., Patz, J.A., Prentice, I. C., Ramankutty, N., and Snyder, P.K. (2005). Global consequences of land use. *Science* 309(5734): 570-574.

Ryan, R. L., Erickson, D. L., & De Young, R. (2003). Farmers' motivations for adopting conservation practices along riparian zones in a mid-western agricultural watershed. *Journal of Environmental Planning and Management*, 46(1), 19-37.

Recommended:

Olabisi, M., Tschirley, D.L., Nyange, D ., & Awokuse, T. (2019) Energy demand substitution from biomass to imported kerosene: Evidence from Tanzania. *Energy Policy*, 130(2), 243-52.

Richardson, R. B. (2010). Ecosystem services and food security: Economic perspectives on environmental sustainability. *Sustainability* 2(11): 3520-3548.

Roe, Dilys and Joanna Elliott. 2004. Poverty reduction and biodiversity conservation: rebuilding the bridges. *Oryx* 38(2): 137–139.

Week 14 April 13, 2022 Urban political ecology and sustainability

Required:

Adams, W. M. (2019). Green Development, Ch. 6: Corporations and sustainability

Agyeman, J., and Tom Evans. "Toward Just Sustainability in Urban Communities: Building Equity Rights with Sustainable Solutions." *The Annals of the American Academy of Political and Social Science* 590 (2003): 35–53.

Wu, Jianguo. (2014). Urban ecology and sustainability: The state-of-the-science and future directions. *Landscape and Urban Planning* 125: 209-221.

Recommended:

Pacione, Michael. (2003). Urban environmental quality and human wellbeing—a social geographical perspective. *Landscape and Urban Planning* 65(1–2):19-30.

Wolch, Jennifer R., Jason Byrne, & Joshua P. Newell. (2014). Urban green space, public health, and environmental justice: The challenge of making cities 'just green enough'. *Landscape and Urban Planning* 125: 234-244.

Week 15 April 20, 2022 Consumption and sustainability

Required:

Adams, W. M. (2019). Green Development, Ch. 13: Green development: reformism or radicalism?

Gowdy, John. (2007). Avoiding self-organized extinction: Toward a co-evolutionary economics of sustainability. *International Journal of Sustainable Development and World Ecology* 14(1): 27-36.

Arrow, Kenneth, Partha Dasgupta, Lawrence Boulder, Gretchen Daily, Paul Ehrlich, Geoffrey Heal, Simon Levin, Karl-Göran Mäler, Stephen Schneider, David Starrett, & Brian Walker. (2004). Are we consuming too much? *Journal of Economic Perspectives* 18(3): 147-172.

Luttmer, E.F.P. (2005). Neighbors as negatives: Relative earnings and well-being. *Quarterly Journal of Economics* []: 963--1002.

Recommended:

Martínez-Alier, Joan, Unai Pascual, Franck-Dominique Vivien, & Edwin Zaccai. (2010). Sustainable degrowth: Mapping the context, criticisms and future prospects of an emergent paradigm. *Ecological Economics* 69(9): 1741–1747.

van den Bergh, Jeroen C.J.M. (2011). Environment versus growth—A criticism of “degrowth” and a plea for “a-growth”. *Ecological Economics* 70: 881-890.

Week 16 April 27, 2022 Final Class Period,

Review of topics covered, and tasks completed

Week 17 Wednesday, May 4, 2022 Final exam period, 12:45 – 2:45pm

Discussion of sustainability assessments

NOTES:

[The Ecosystem Services Framework and Natural Capital Conservation](#) — 2008

By: Turner, R. K. and G. C. Daily

Environmental and Resource Economics 39(1):25-35.

Peer-Reviewed Publication: <http://dx.doi.org/10.1007/s10640-007-9176-6>

[The Value of Nature and the Nature of Value](#) — 2000

By: Daily, Gretchen C., Tore Söderqvist, Sara Aniyar, Kenneth Arrow, Partha Dasgupta, Paul R. Ehrlich, Carl Folke, AnnMari Jansson, Bengt-Owe Jansson, Nils Kautsky, Simon Levin, Jane Lubchenco, Karl-Göran Måler, David Simpson, David Starrett, David Tilman and Brian Walker

Science 289(5478):395-396.

Peer-Reviewed Publication: <http://dx.doi.org/10.1126/science.289.5478.395>