Course requirements

Attendance

The course is comprised of lectures, seminars, labs and an excursion. Unless there are valid reasons to the contrary, participation is required in all components marked as "mandatory" in the schedule. Students who have been unable to participate due to circumstances such as accidents or sudden illness will be offered the opportunity to compensate for or re-take compulsory components. This also applies to students who have missed classes because of activities as a student representative.

Assessment

Assessment is carried out by means of evaluation of a written group project and oral presentation of the group project (35% of final grade), two individual assignments (each 5% of final grade), completion of a log book (5 % of final grade) and a final individual paper (take-home exam) (50 % of final grade). The course includes opportunity for re-examination of all assessments at the end of the course and five weeks after hand-in of the final assessment. Two further re-examinations of the same course are offered within a year of the end of the course.

The assignments will be introduced at the start of the course and posted on Canvas.

Office hours

BY APPOINTMENT ONLY - Please email us to set up a time to talk.

Darin Wahl
Room 116
Josephson
darin.wahl@lucsus.lu.se

George Neville
Room 111
Josephson
george.neville@lucsus.lu.se

Reading instructions

These readings have been assigned by the guest lecturers for the course, so it is strongly recommended that you read these in preparation for each lecture.

Weekly readings

Week 1
2/9 – Course Introduction: Darin Wahl and George Neville

Carson, R. (1962) 2002. Silent Spring. New York: Houghton Mifflin. 1: A fable for tomorrow + 2: The obligation to endure. (Available online). (13 pages)

Kates, R et al. "Sustainability Science." *Science* 292 (5517): 641-642.

Raworth, K. 2012. "A Safe and Just Space for Humanity. Can we live within the doughnut?" Oxford: Oxfam Discussion Papers.

Rockström, J et al. 2009. "A safe operating space for humanity." *Nature* 461(7263): 472-475.

4/9 – Key Concepts: Kimberly Nicholas

Ritchie and Moser, 2017. CO_2 and other Greenhouse Gas Emissions.
https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions

UNFCCC Paris Agreement 2015
https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

O'Neill, Daniel W., Andrew L. Fanning, William F. Lamb, and Julia K. Steinberger. "A Good Life for All within Planetary Boundaries." Nature Sustainability1, no. 2 (February 2018): 88–95. https://doi.org/10.1038/s41893-018-0021-4.

Week 2

9/9 – Indigeneity and Sustainability: David Harnesk

Li, T. M.(2010). Indigeneity, capitalism, and the management of dispossession. *Current Anthropology*, *51*(3), 385-414.

Persson, S., Harnesk, D., & Islar, M. (2017). What local people? Examining the Gállok mining conflict and the rights of the Sámi population in terms of justice and power. *Geoforum*, *86*, 20-29.

11/9 – Social Science for Sustainability Studies: David O'Byrne

Elder-Vass, D. 2010. *The Causal Power of Social Structures – Emergence, Structure and Agency*. Cambridge University Press. "The problem of structure and agency" pp. 1-9.

+ approximately 20 pages of media articles

Week 3

16/9 – Introduction to Climate Change: Lennart Olsson - *NOTE meet in Ostrom*

Key Reading:

IPCC, 2018: Summary for Policymakers. *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.* Available at: https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf

For further reading:
Boyd, E., 2017. Climate adaptation: Holistic thinking beyond technology. Nat. Clim. Chang. 7, 97–98. https://doi.org/10.1038/nclimate3211. (2 pages)

Hulme, M. 2009. "Why We Disagree about Climate Change." Cambridge: Cambridge UP. P 1-15. (15 pages)

Shove, E., 2010. Beyond the ABC: Climate change policy and theories of social change. Environ. Plan. A 42, 1273–1285. https://doi.org/10.1068/a42282. (12 pages)

18/9 – Biodiversity: Chad Boda

Key Readings:

Haddad et al. 2015. Habitat fragmentation and its lasting impact on Earth's ecosystems. Science Advances. Vol. 1, no. 2

Taubert et al. 2018. Global patterns of tropical forest fragmentation. Nature, 554, 519-522

For further reading:
IPBES report on biodiversity loss:
https://www.ipbes.net/sites/default/files/downloads/spm_unedited_advance_for_posting_htn.pdf

Week 4
23/9 – Environmental Justice Movements: Mine Islar

Key Readings:
Martinez-Alier, J. Temper, L., Del Bene,D and Scheidel, A . 2016. Is there a Global Environmental Justice Movement? TNI publications. ISS: The Netherlands.
https://www.tni.org/files/publication-downloads/16-icas_cp_martinez_alier_et_al.pdf

Martinez-Alier, J., Anguelovski, I., Bond, P., Del Bene, D., Demaria, F., Gerber, J.-F., Greyl, L., Haas, W., Healy, H., Marín-Burgos, V., Ojo, G., Firpo Porto, M., Rijnhout, L., Rodríguez-Labajos, B., Spangenberg, J., Temper, L., Warlenius, R., and Yánez, I. 2014. Between Activism and Science: Grassroots Concepts for Sustainability Coined by Environmental Justice Organizations. *Journal of Political Ecology* 21: 19–60.

For further reading:

Agarwal, B. 2000. “Conceptualizing environmental collective action: why gender matters.” *Cambridge Journal of Economics* 24: 283–310.

Nixon, R. 2011. *Slow Violence and the Environmentalism of the Poor*. Cambridge, Mass.: Harvard UP. *Chapter 1.*

25/9 – Governance of Sustainability: Torsten Krause

Key Readings:
Berkes, F. 2017. Environmental Governance for the Anthropocene? Social-Ecological Systems, Resilience, and Collaborative Learning, *Sustainability* 2017, *9*(7), 1232. Available at: http://www.mdpi.com/2071-1050/9/7/1232/htm

F. Pendrill, U. M. Persson, J. Godar, T. Kastner, Deforestation displaced: trade in forest-risk commodities and the prospects for a global forest transition. *Environmental Research Letters* **14**, 055003 (2019).

For further reading:
Dietz, S., Neumayer, E., 2009. Economics and the governance of sustainable development, Governing Sustainability. Pp 259-282. (23 pages)

Doak, D. F. et al. 2014. What is the future of conservation? Trends in Ecology and Evolution, 29(2): 77-81. (4 pages)

Dobson, Andy. 2009. Chapter: Citizens, citizenship and governance for sustainability. Governing Sustainability pp 125-141. (16 pages)

Kareiva, P and Marvier, M. 2012. What is conservation science? BioScience, 62:962-969. (6 pages)

Schröter, M. et al. 2014. Ecosystem Services as a Contested Concept: A Synthesis of Critique and Counter-Arguments. Conservation Letters, 7(6), 514-523. (18 pages)

Week 5
30/9 – Group work

2/10 – Group Presentations

Week 6
7/10 – FIELD TRIP SYSAV Waste Recycling Center

9/10 – Transformation, Adaptation, and Resilience: Darin Wahl
Meadows, D.H., 2009. Chapter 6: Leverage points: Places to intervene in a system, in:

Thinking in Systems. (20 pages)

Atwood, M. 2015. "It's not climate change. It's everything change." Matter. https://medium.com/matter/it-s-not-climate-change-it-s-everything-change-8fd9aa671804

Orlove, B., 2005. Human adaptation to climate change: A review of three historical cases and some general perspectives. Environ. Sci. Policy 8, 589–600. https://doi.org/10.1016/j.envsci.2005.06.009 (11 pages)

Sen, A. 2004. Why we should preserve the spotted owl. London Review of Books, 26(3):10-11. (Available online) (2 pages)

Week 7

14/10 – Sustainability Lab #1 – Food: Kimberly Nicholas

Roser and Ritchie, Hunger and Undernourishment. https://ourworldindata.org/hunger-and-undernourishment

Foley, Jonathan A., Navin Ramankutty, Kate A. Brauman, Emily S. Cassidy, James S. Gerber, Matt Johnston, Nathaniel D. Mueller, et al. "Solutions for a Cultivated Planet." Nature478, no. 7369 (October 2011): 337–42. https://doi.org/10.1038/nature10452.

Karlsson, Johan O., Georg Carlsson, Mikaela Lindberg, Tove Sjunnestrand, and Elin Röös. "Designing a Future Food Vision for the Nordics through a Participatory Modeling Approach." Agronomy for Sustainable Development38, no. 6 (December 2018). https://doi.org/10.1007/s13593-018-0528-0.

16/10 – Sustainability Lab #2 – Virtual Water: Ann Åkerman

A quick read on virtual water:
Hallock, B. (2014) To make a burger, first you need 660 gallons of water… *Los Angeles Times* [online] Available at: https://www.latimes.com/food/dailydish/la-dd-gallons-of-water-to-make-a-burger-20140124-story.html?smid=nytcore-ios-share

Week 8

21/10 – Sustainability Lab #3 – Energy: Sara Brogaard

23/10 – Sustainability Lab #4 – Health: Sara Gabrielsson

Week 9

28/10 – Assignment Discussion Seminar: Darin Wahl and George Neville

30/10 – Wrap Up and Course Evaluation: Darin Wahl and George Neville