



Literature for MESS33, Sustainability Science applies from autumn semester 2013

Literature established by The Board of the Lund University Centre for
Sustainability Studies on 2013-10-22 to apply from 2013-08-28

See appendix.

Appendix
Reading List MESS33 Sustainability Science, 10 credits
Hållbarhetsvetenskap

Litteraturlistan fastställd av LUCSUS styrelse den 2013-10-22

Course text book

Meadows, Donella. (2008) *Thinking in Systems: A Primer*, White River Junction, Chelsea Green Pub Co (240 pages), or the 2009 version by Taylor & Francis Ltd. (218 pages)

Meadows, Randers, Meadows (2004) *Limits to growth, the 30 year update*, White river Junction

Articles (subject to change)

How we 'do' Science

Funtowicz, S.O. and Ravetz, J.R. *Science for the Post-Normal Age*. Futures. Sept. 1993. 739-755.

Systems/Complexity

Rotmans, J., *Societal Innovation: between dream and reality lies complexity*, in *Inaugural Addresses, Research in Management Series*. 2005, Erasmus University Rotterdam.

Manson, S. M. *Simplifying complexity: a review of complexity theory*, *Geoforum*. 2001, 32 (3) 405-414.

Social Theory/Basis for Scenarios

Verweij, M., et al., *Clumsy Solutions for a Complex World: The Case of Climate Change*. Public Administration, 2006. 84(4): p. 817-843.

Establishment and Development of SustSci

Kates, R.W., et al., *Sustainability Science*. Science, 2001. 292(5517), 641-2.

Perrings, C., *Future challenges*. Proceedings of the National Academy of Sciences, USA 2007. 104(39): p. 15179.

Cash, D.W., et al., *Knowledge systems for sustainable development*. PNAS, 2003, 100(14): p. 8086-8091.

Clark, W.C. and Dickson, Nancy M. *Sustainability Science: the emerging research program*. PNAS, 2006. 100(14): p. 8059-8061.

Kates, R.W. and T.M. Parris, *Long-term trends and a sustainability transition*. Proceedings of the National Academy of Sciences, USA 2003. 100(14): p. 8062.

Kates, R.W. *From the Unity of Nature to Sustainability Science: Ideas and Practice*. CID Working Paper. 2011. (16 pages) http://www.hks.harvard.edu/var/ezp_site/storage/fckeditor/file/pdfs/centers-programs/centers/cid/publications/faculty/wp/218.pdf

Ziegler, R and Ott, K. *The quality of sustainability science: a philosophical perspective*. Sustainability: Science, Practice, Policy. 2011. 7(1). 31-44. (Available online)

Bettencourt, L. M.A. and Kaur, J. *Evolution and structure of sustainability science*. Proceedings of the National Academies, USA. 2011. 108 (49): 19540-19545. (6 pages)

Kates, R.W. *What kind of a science is sustainability science?* Proceedings of the National Academies, USA. 2011. 108 (49): 19449-19450.

Jerneck, Anne, et al. Structuring sustainability science. Sustainability Science 6, 69-82

Resilience Theory

Holling, C.S., *Resilience and stability of ecological systems*. Annual Review of Ecology and Systematics, 1973. 4: p. 1-24. (Long: please skim!)

Adger, W.N., *Social and ecological resilience: are they related?* Progress in Human Geography, 2000. 24(3): p. 347-364.

Anderies J.M., Janssen M.A., Ostrom Elinor. *A framework to analyze the robustness of social-ecological systems from an institutional perspective*. Ecology and Society. 2004. 9(1), 18-34.

Ecosystems approach

Tallis, H., et al., *An ecosystem services framework to support both practical conservation and economic development*. Proceedings of the National Academy of Sciences, 2008. 105(28): p. 9457.

Olsson, P., C. Folke, and T.P. Hughes, *Navigating the transition to ecosystem-based management of the Great Barrier Reef, Australia*. Proceedings of the National Academy of Sciences, 2008. 105(28): p. 9489.

Panaceas & SES Framework

Ostrom, Eleanor, M.A. Janssen, and J.M. Anderies, *Going beyond panaceas special feature: going beyond panaceas*. PNAS, 2007. 104: p. 15176-15178.

Ostrom, Eleanor, *A General Framework for Analyzing Sustainability of Social-Ecological Systems*. Science, 2009. 325(24 July): p. 419-422.

Pahl-Wostl, Claudia. (2009). *A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes*. Global Environmental Change 19(3), 354-365.

Transition Theory/Mgmt.

Geels, F.W., *From sectoral systems of innovation to socio-technical systems Insights about dynamics and change from sociology and institutional theory*. Research Policy, 2004. 33(6-7): p. 897-920.

Geels, F. W. The multi-level perspective on sustainability transitions: Responses to seven criticisms. Environmental Innovation and Societal Transitions, 2011. 1: 24-40.

Avelino, Flor. and J. Rotmans, *Power in transition*. European Journal of Social Theory, 2009. 12(4): p. 543-569.

Political Ecology

Turner II, B. L. and Robbins, P. Land-Change Science and Political Ecology: Similarities, Differences, and Implications for Sustainability Science. *Annu. Rev. Environ. Resour.* 2008. 33:295–316.

Supplementary reading (approximately 100 pages)

Max-Neef, M., *Foundations of transdisciplinarity*. *Ecological Economics*, 2005. 53: p. 5-16.

Janssen, M.A., et al., *Scholarly networks on resilience, vulnerability and adaptation within the human dimensions of global environmental change*. *Global Environmental Change*, 2006. 16(3): p. 240-252.

Geels, F. W. Ontologies, socio-technical transitions (to sustainability), and the multi-level perspective. *Research Policy*, 2010; 39: 495-510.