

Intensive course 27.11.17-30.11.17

Green, circular, bioeconomy: limits and synergies of three sustainability avenues

Reading material

Day 1 - Circular economy

Kirchherr, J., Reike, D., Hekkert, M., 2017. Conceptualizing the circular economy: An analysis of 114 definitions. *Resour. Conserv. Recycl.* 127, 221–232. doi:10.1016/j.resconrec.2017.09.005

Murray, A., Skene, K., Haynes, K., 2015. The Circular Economy: An Interdisciplinary Exploration of the Concept and Application in a Global Context. *J. Bus. Ethics.* 3, 369–380. doi:10.1007/s10551-015-2693-2

Stahel, W.R. 2015. Circular Economy. *Nature* 531, 435-438. doi:10.1038/531435a

The Ellen MacArthur Foundation, 2012. Towards a Circular Economy: Business Rationale for an Accelerated Transition. https://www.ellenmacarthurfoundation.org/assets/downloads/TCE_Ellen-MacArthur-Foundation_9-Dec-2015.pdf

Day 2 - Bioeconomy

El-Chichakli, B., von Braun, J., Lang, C., Barben, D., Philp, J., 2016. Policy: Five cornerstones of a global bioeconomy. *Nature* 535, 221–223. doi:10.1038/535221a

Meyer, R. 2017. Bioeconomy Strategies: Contexts, Visions, Guiding Implementation Principles and Resulting Debates. *Sustainability*, 9(6).

Pfau, S.F., Hagens, J.E., Dankbaar, B., Smits, A.J.M., 2014. Visions of sustainability in bioeconomy research. *Sustainability* 6, 1222-1249. doi:10.3390/su6031222

Priefer, C., Jörissen, J., Frör, O., 2017. Pathways to Shape the Bioeconomy. *Resources* 6, 10. doi:10.3390/resources6010010

Day 3 - Green economy

Braat, L.C., de Groot, R., 2012. The ecosystem services agenda: bridging the worlds of natural science and economics, conservation and development, and public and private policy. *Ecosyst. Serv.* 1, 4–15. doi:10.1016/j.ecoser.2012.07.011

Nesshöver, C., Assmuth, T., Irvine, K.N., Rusch, G.M., Waylen, K.A., Delbaere, B., Haase, D., Jones-Walters, L., Keune, H., Kovacs, E., Krauze, K., Külvik, M., Rey, F., van Dijk, J., Vistad, O.I., Wilkinson, M.E., Wittmer, H., 2017. The science, policy and practice of nature-based solutions: An interdisciplinary perspective. *Sci. Total Environ.* 579, 1215-1227. doi:10.1016/j.scitotenv.2016.11.106

ten Brink P., Mazza, L., B.T., Kettunen, M., and Withana, S., 2012. Nature and its Role in the Transition to a Green Economy. <http://www.teebweb.org/publication/nature-and-its-role-in-a-green-economy/>

Whiteman, G., Walker, B., Perego, P., 2013. Planetary Boundaries: Ecological Foundations for Corporate Sustainability. *J. Manag. Stud.* 50, 307–336. doi:10.1111/j.1467-6486.2012.01073.x

Day 4 – Circular, green and bioeconomy

Bezama, A., 2016. Let us discuss how cascading can help implement the circular economy and the bioeconomy strategies. *Waste Manag. Res.* 34, 593–594. doi:10.1177/0734242X16657973

D'Amato, D., Droste, N., Allen, B., Kettunen, M., Lähtinen, K., Korhonen, J., Leskinen, P., Matthies, B.D., Toppinen, A. 2017. Green, Circular, Bio economy: a comparative analysis of three sustainability concepts. *J. Clean. Prod.* 168, 716-734. doi.org/10.1016/j.jclepro.2017.09.053

Loiseau, E., Saikku, L., Antikainen, R., Droste, N., Hansjürgens, Pitkänen, K., Leskinen, P., Kuikman, P., Thomsen, M., 2016. Green economy and related concepts. *J. Clean. Prod.* 139, 361–371. doi.org/10.1016/j.jclepro.2016.08.024

Martins, N.O., 2016. Ecosystems, strong sustainability and the classical circular economy. *Ecol. Econ.* 129, 32–39. doi.org/10.1016/j.ecolecon.2016.06.003