



Literature for PhD course: **Advanced LCA – consequential modelling, EIO LCA, iLUC, and Social LCA**

September 2nd – 6th 2013 at Aalborg University

Organised by DCEA, Aalborg University in collaboration with the International Life Cycle Academy (ILCA) DCEA: www.DCEA.dk/english ILCA: www.ILCA.es

Consequential modelling

Schmidt J H, Weidema B P (2007) "Shift in the Marginal Supply of Vegetable Oil" International Journal of Life Cycle Assessment 13(3):235-239. (download available at the moodle website)

Suh S, Weidema B P, Schmidt J H, Heijungs R (2010) "Generalized Make and Use Framework for Allocation in Life Cycle Assessment" Journal of Industrial Ecology 14(2):335-353. (download available at the moodle website)

Weidema B P (1993) "Market aspects in product life cycle inventory methodology" Journal of Cleaner Production, vol. 1., 1993 no. 3-4, p. 161-166. (download available at the moodle website)

Weidema B P (2001) "Avoiding co-product allocation in life-cycle assessment" Journal of Industrial Ecology 4(3):11-33. (download available at the moodle website)

Weidema B P, Schmidt J H. (2010) "Avoiding allocation in life cycle assessment revisited" Column for Journal of Industrial Ecology 14(2):192-195. (download available at the moodle website)

Weidema B P, H Wenzel, C Petersen, K Hansen (2004) "The product, functional unit and reference flows in LCA" København: Miljøstyrelsen. (Environmental News 70). <http://www2.mst.dk/Udgiv/Publications/2004/87-7614-233-7/pdf/87-7614-234-5.PDF>

Weidema B P, T Ekvall, R Heijungs (2009) "Guidelines for applications of deepened and broadened LCA" Deliverable D18 of work package 5 of the CALCAS project. <http://fr1.estis.net/includes/file.asp?site=calcas&file=7F2938F9-09CD-409F-9D70-767169EC8AA9>

Weidema B P, Bauer C, Hischier R, Mutel C, Nemecek T, Vadenbo C O, Wernet G. (2013). "Overview and methodology. Data quality guideline for the ecoinvent database version 3" Ecoinvent Report 1(v3). St. Gallen: The ecoinvent Centre. http://www.ecoinvent.org/fileadmin/documents/en/Data_Quality_Guidelines/01_DataQualityGuideline_v3_Final.pdf

Input-output modeling (the basics, hybrid LCA, IO-based mass flow analysis and waste accounts)

Weidema B P, Ekvall T, Heijungs R (2009) · Guidelines for applications of deepened and broadened LCA. Deliverable D18 of work package 5 of the CALCAS project. <http://fr1.estis.net/includes/file.asp?site=calcas&file=7F2938F9-09CD-409F-9D70-767169EC8AA9> (read chapter 2 & pp 41-43)

Schmidt J H, Merciai S, Delahaye R, Vuik J, Heijungs R, Koning A and Sahoo A (2012) · Recommendation of terminology, classification, framework of waste accounts and MFA, and data collection guideline (FINAL DRAFT). Deliverable D4.1 of the CREEA project (http://www.creea.eu/index.php/documents2/doc_download/26-deliverable-d41-public).

Schmidt J H, Thrane M (2009) · Life cycle assessment of aluminium production in new Alcoa smelter in Greenland. Government of Greenland. http://www.smv.gl/Baggrundsrapporter/lca_2009.pdf (read chapter 3.3, 3.4, 8.3, 9.3 and 10.3)

Schmidt J H · Plastberegner.dk - LCA tool for plastics converters in Denmark - Documentation of the tool and database. Plastindustrien, Copenhagen. http://plastberegner.dk/LCA-report_20121008.pdf (read chapter 3.7, 7 and 8)

Modeling of indirect land use change (iLUC)

Schmidt J H, Reinhard J, and Weidema B P (2012) · A Model of Indirect Land Use Change. Paper presented at the 8th International Conference on LCA in the Agri-Food Sector, St. Malo, France, 2-4 October 2012 (download available at the moodle website)

Jannick H Schmidt, Bo P Weidema, Miguel Brandão, Jürgen Reinhard (2013) · Modelling Indirect Land-Use Changes in Life Cycle Assessment. Draft article (download available at the moodle website)

Haberl H, Heinz Erb K, Krausmann F, Gaube V, Bondeau A, Plutzer C, Gingrich S, Lucht W and Fischer-Kowalski M (2007) · Quantifying and mapping the human appropriation of net primary production in earths terrestrial ecosystems. PNAS, vol. 104, no. 31, pp 12942–12947. <http://www.pnas.org/content/104/31/12942.full.pdf>

Edwards R, Mulligan D and Marelli L (2010). Indirect Land Use Change from increased biofuels demand – Comparison of models and results for marginal biofuels production from different feedstocks. Joint Re-search Centre (JRC), European Commission. http://ec.europa.eu/energy/renewables/consultations/doc/public_consultation_iluc/study_4_iluc_modelling_comparison.pdf

EEA (2011) · Opinion of the EEA Scientific Committee on Greenhouse Gas Accounting in Relation to Bioenergy. European Environment Agency Scientific Committee. http://www.eea.europa.eu/about-us/governance/scientific-committee/sc-opinions/opinions-on-scientific-issues/sc-opinion-on-greenhouse-gas/at_download/file

Social LCA resources

The Social Hotspot Database
<http://socialhotspot.org/>

Global Reporting Initiative. (2011). *G3.1 Sustainability Reporting Guidelines*.
<https://www.globalreporting.org/resource/library/G3.1-Sustainability-Reporting-Guidelines.pdf>

Reitinger C, Dumke M, Barosevic M, Hillerbrand R. (2011). *A conceptual framework for impact assessment within SLCA*. International Journal of Life Cycle Assessment. DOI 10.1007/s11367-011-0265-y. <http://www.humtec.rwth-aachen.de/files/fulltext-2.pdf>

Fonseca A. (2010). *Barriers to Strengthening the Global Reporting Initiative Framework: Exploring the perceptions of consultants, practitioners, and researchers*. 2nd Canadian Sustainability Indicators Network (CSIN) Conference: Accountability Through Measurement, 2010, Toronto. http://www.csin-rcid.ca/downloads/csin_conf_alberto_fonseca.pdf

Commission on the Measurement of Economic Performance and Social Progress (2009). *Report by the Commission on the Measurement of Economic Performance and Social Progress*.

http://www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf

Andrews E S, Barthel L-P, Beck T, Benoît C, Ciroth A, Cucuzzella C, Gensch C-O, Methot A-L, Moberg A, Hébert J, Lesage P, Manhart A, Mazeau P, Mazijn B, Norris G, Parent J, Prakash S, Reveret J-P, Spillemaeckers S, Ugaya S, Maria L, Valdivia S, Weidema B P. (2009). *Guidelines for Social Life Cycle Assessment of Products*. United Nations Environment Programme.

http://www.unep.fr/shared/publications/pdf/DTIx1164xPA-guidelines_sLCA.pdf

UNEP-SETAC Methodological sheets

http://www.estis.net/sites/lcinit/default.asp?site=lcinit&page_id=A8992620-AAAD-4B81-9BAC-A72AEA281CB9

Joint UNECE/OECD/Eurostat Working Group on Statistics for Sustainable Development. (2008). *Measuring sustainable development*. New York and Geneva: United Nations. <http://www.oecd.org/greengrowth/41414440.pdf>

Sawhny V. (2008). *Analyzing Corporate Social Responsibility Measurement Parameters*. Gainsville: Institute for Public Relations. http://www.instituteforpr.org/iprwp/wp-content/uploads/SawhnyKEPRRA_Award.pdf

Grießhammer R, Buchert M, Gensch C-O, Hochfeld C, Manhart A, Reisch L, Rüdenauer I. (2007). *Prosa – Product Sustainability Assessment Guideline. (PROSA 2.0)*. Freiburg: Öko-Institut e.V. – Institute for Applied Ecology.

http://www.prosa.org/fileadmin/user_upload/pdf/leitfaden_eng_final_310507.pdf

Weidema B P. (2006). *The Integration of Economic and Social Aspects in Life Cycle Impact Assessment*. International Journal of Life Cycle Assessment 11(1):89-96 (download available at the moodle website)

Weidema B P. (2005). *The integration of economic and social aspects in life cycle impact assessment*. Presentation for the LCM2005 conference, Barcelona, 2005.09.05-07. http://www.lca-net.com/files/lcm2005_paper.pdf

Weidema B P. (2002). *Quantifying Corporate Social Responsibility in the value chain*. Presentation for the Life Cycle Management Workshop of the UNEP/SETAC Life Cycle Initiative at the ISO TC207 meeting, Johannesburg, 2002.06.12. <http://www.lca-net.com/files/csr.pdf>