

CURRICULUM VITAE (updated: April 2018)

BIOSCETCH

Fridolin Krausmann is professor of sustainable resource use at the Institute of Social Ecology at the University of Natural Resources and Life Sciences, Vienna. In his research he focuses on socio-metabolic transition processes. He studies long term changes in the use of energy, materials and land in local rural and urban systems, national economies and at the global scale. His research contributed to the development of socio-ecological concepts and methods and their application in industrial ecology and environmental history. He has published over 100 articles in peer review journals and 50 contributions to books.

PERSONAL

Name: **Fridolin Peter KRAUSMANN**
Academic degrees: Mag. rer. nat.; Dr. rer. nat.; Univ. Doz.
Date and place of birth: 03 August 1968; Ried im Innkreis/Oberösterreich
Nationality: Austria

EDUCATION and ACADEMIC QUALIFICATION

2004 **Habilitation in social ecology** at Klagenfurt University. Habilitation thesis: The interrelation of land use and social metabolism: A multi scale assessment of the Austrian case 1800-2020.
2001 **Doctorate in ecology** at the University of Vienna. Doctoral thesis: Land use, energy and industrial modernization. An empirical study on the development of the socio-economic energy system and its relation to land use and anthropogenic interference with ecological energy flows in Austria 1830-1995.
1996-1998 **Advanced study course „Culture and Environment“** at the University of Vienna, faculty of humanities. Thesis: Sustainability in agrarian societies.
1994 Graduation: **Master of Science (M.Sc.) in biology/botany** at the University of Vienna. Masters thesis: Renewable resources in Austria: potential and risk.
1987-1994 **Graduate studies in biology/botany** at the Universities of Salzburg and Vienna

PROFESSIONAL POSITIONS

2018- **Professor of sustainable resource use** at the University of Natural Resources and Life Sciences, Vienna
2009-2018 **Professor of sustainable resource use** at Alpen Adria University. **Deputy head** of the Inst. of Social Ecology (2009-2015); **Vice dean** for research of the Fakultät für Interdisziplinäre Forschung und Fortbildung (IFF) at AAU (2016-2018).
2007-2009 **Associate Professor for sustainable resource use** at Klagenfurt University. **Coordinator** of the research area **social metabolism**.
2001-2007 **Senior researcher and lecturer** at the Inst. of Social Ecology. **Coordinator** of the research area **Historical Sustainability Research**.
1999-2001 **Researcher and lecturer** at the Department of Social Ecology at the Institute for Interdisciplinary Studies at Austrian Universities, Vienna.
1995-1999 **Freelance research work** for the Department of Social Ecology at the IFF and associate partner of the environmental consultant company Gohla & Krausmann OEG

SHORTLIST POSITIONS and CURRENT APPLICATIONS

Oct. 2006 Shortlisted (2nd position), **Prof. in Environmental History**, AAU Klagenfurt.

LANGUAGE SKILLS

German: Mother tongue; English: Proficient user; Spanish: Basic user

REFEREE for Scientific Journals / Organizations / Publishers

Scientific Journals: Land Use Policy; Ecological Economics; J. of Industrial Ecology; The Science of the Total Environment; Environmental Management, Hydrology and Earth System Sciences; Pedosphere; Energy Policy; Environmental Science and Technology; Global Environmental Change; J. of Cleaner Production; Biogeosciences, Earth System Dynamics; Ecol. Indicators; Historia Agraria; Resources Conservation and Recycling a.o..

Funding Agencies: Katholieke Universiteit Leuven, Austrian Ministry of Agriculture and Environment, Swiss National Science Fund, Grant Agency of the Academy of Sciences of the Czech Republic, European Science Fund, European Research Council (ERC Starting Grants), French Foundation for Research on Biodiversity, Bundesministerium f. Bildung und Forschung (D).

Academic programs: Reviewer for the SENSE phd program of Wageningen University (2008), Member of the doctoral commission of the Universidad Granada (2007).

Member of the editorial board: Online journal Klaudyán (Prague); Geo-Puc (Rio de Janeiro), Sustainability (mdpi, Basel). Global Environment (White Horse Press).

MEMBERSHIP in PROFESSIONAL BODIES

2004-2008: Member of the Steering Committee of the **International Geographical Union** Commission on Land Use and Land Cover Change (IGU-LUCC)

Since 2002: Member of the International Society for **Industrial Ecology**

Since 2000: Member of the European Society for **Environmental History**

Since 1999: Member of the International Society **for Ecological Economics**

INTERNATIONAL SOJOURNS

2002 **Rural and Regional Fellowship** at the Center for Rural and Regional Studies, Southwest State University, Marshall, MN.

2006 Research sojourn at the **University of Saskatchewan**, Saskatoon, Canada

2010 Research sojourn at the **University of Saskatchewan**, Saskatoon, Canada

ACADEMIC TEACHING

Since 1998 Lectures and seminars in **social and human ecology, environmental history, agriculture and land use, methods of social ecology, physical accounting**, a.o. at BOKU, AAU (Masters and Doctoral program in Social Ecology), Univ. of Vienna, Univ. of Salzburg, Univ. de Girona, Univ. Autònoma Barcelona.

Since 2001 (Co-)Supervision of ca. **50 master- and doctoral thesis**; 10 ongoing.

RESEARCH PROJECTS

Since 2000 **Coordination of 25, collaboration in further 38** national and international research projects. Principal investigator of the project "MISO - A model of material stocks and flows in the global metabolic transition", funded by the Austrian Science Fund (FWF) for the period 2015 to 2018.

PUBLICATIONS

For pdf versions and more information visit:

<http://www.wiso.boku.ac.at/sec/personen/krausmann-fridolin/>

https://www.researchgate.net/profile/Fridolin_Krausmann?ev=hdr_xprf

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See also the webpage of the Inst. of Social Ecology for **downloadable**

publications: <https://www.wiso.boku.ac.at/sec/publikationen/>

data: <https://www.wiso.boku.ac.at/sec/data-download/>

Books:

1. Sieferle, R. P., Krausmann, F., Schandl, H., and Winiwarter, V. 2006. **Das Ende der Fläche. Zum gesellschaftlichen Stoffwechsel der Industrialisierung.** Köln: Böhlau.

2. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. 2016. **Social Ecology: Society-Nature Relations across Time and Space**. Springer International Publishing: Switzerland.

Articles in peer reviewed journals:

1. Duro, J.A., Schaffartzik, A., Krausmann, F., 2018. **Metabolic inequality and its impact on efficient contraction and convergence of international material resource use**. *Ecological Economics* 145, 430-440.
2. Miatto, A., Schandl H., Wiedenhofer, D., Krausmann, F., Tanikawa, H. 2017. **Modelling long-term material flows and stocks of the road network in the United States**. *Resources, Conservation and Recycling* 127, 168-178.
3. Shao, Q., Schaffartzik, A., Mayer, M., Krausmann, F. 2017. **The high 'price' of dematerialization: A dynamic panel data analysis of material use and economic recession**, *Journal of Cleaner Production*, 167 (2017) 120-132.
4. Güldner, D. and Krausmann, F. 2017. **Nutrient recycling and soil fertility management in the course of the industrial transition of traditional, organic agriculture: The case of Bruck estate, 1787-1906**. *Agriculture, Ecosystems and Environment*, 249 (2017) 80-90.
5. Krausmann, F., Schandl, H., Eisenmenger, N., Giljum, S., Jackson, T. 2017. **Material Flow Accounting: Measuring Global Material Use for Sustainable Development**. *Annual Review of Environment and Resources* 42, 647-675.
6. Haberl, H., Wiedenhofer, D., Erb, K-H., Görg, C. and Krausmann, F. 2017. **The Material Stock-Flow Nexus: A New Approach for Tackling the Decoupling Conundrum**. *Sustainability* 9, 1049, doi:[10.3390/su9071049](https://doi.org/10.3390/su9071049).
7. Schandl, H., Fischer-Kowalski, M., West, J., Giljum, S., Dittrich, M., Eisenmenger, N., Geschke, A., Lieber, M., Wieland, H., Schaffartzik, A., Krausmann, F., Gierlinger, S., Hosking, K., Lenzen, M., Tanikawa, H., Miatto A., Fishman, T. 2017. **Global Material Flows and Resource Productivity: Forty Years of Evidence**. *Journal of Industrial Ecology* (online first).
8. Gingrich, S., Theurl, M.C., Erb, K., Krausmann, F., 2017. **Regional specialization and market integration: agroecosystem energy transitions in Upper Austria**. *Reg. Environ. Change* online first.
9. Marull, J., Delgadillo, O., Cattaneo, C., La Rota, M.J., Krausmann, F., 2017. **Socioecological transition in the Cauca river valley, Colombia (1943-2010): towards an energy-landscape integrated analysis**. *Reg. Environ.* online first.
10. Krausmann, F., Wiedenhofer, D., Lauk, C., Haas, W., Tanikawa, H., Fishman, T., Miatto, A., Schandl, H., Haberl H. 2017. **Global socioeconomic material stocks rise 23-fold over the 20th century and require half of annual resource use**. *PNAS* 114 (8), 1880-1885.
11. Neundlinger, M., Gingrich, S., Güldner, D., Krausmann, F., Tello, E. 2017. **Land, Food and Labor in Pre-Industrial Agro-Ecosystems – A Socio-Ecological Perspective on Early 19th Century Seigneurial Systems**. *Historia Agraria* 71, 143-178.
12. Galan, E.S., Padró, R., Marco, I., Tello, E., Cunfer, G., Guzmán, G.I., González de Molina, M., Krausmann, F., Gingrich, S., Sacristán, V., Moreno-Delgado, D. (2016). **Widening the analysis of Energy Return on Investment (EROI) in agro-ecosystems: Socio-ecological transitions to industrialized farm systems (the Vallès County, Catalonia, c.1860 and 1999)**. *Ecological Modelling* 336, 13-25.
13. Krausmann, F., Gaugl, B., West, J. and Schandl, H. 2016. **The metabolic transition of a planned economy: Material flows in the USSR and the Russian Federation 1900 to 2010**. *Ecological Economics* 124, 76-85.
14. Schaffartzik, A., Mayer, A., Eisenmenger, N., Krausmann, F. 2016 **Global patterns of metal extractivism, 1950-2010: Providing the bones for the industrial society's skeleton**. *Ecological Economics* 122, 101-110.
15. Tello, E., Galán, E., Sacristán V., Cunfer, G., Guzmán, G.I., González de Molina, M., Krausmann, F., Gingrich, S., Padró, R., Marco, I., Moreno-Delgado, D. 2016. **Opening the black box of energy throughputs in farm systems: A decomposition analysis of final EROI into its internal and external returns (the Vallès County, Catalonia, c.1860 and 1999)**. *Ecological Economics* 121, 160-174.
16. Teixidó-Figueras, J., Steinberger, J.K., Krausmann, F., Haberl, H., Wiedmann, T., Peters, G., Duro, J.A., Kastner, T. 2016, **International inequality of environmental pressures: decomposition and comparative analysis**, *Ecological Indicators*, 62, 163-173.
17. Fetzel, T., Niedertscheider, M., Haberl, H., Krausmann, F., Erb, K.H. 2016. **Patterns and changes of land use and land-use efficiency in Africa 1980 - 2005**. An analysis

- based on the Human Appropriation of Net Primary Production framework, *Regional Environmental Change* 16 (5) 1507–1520.
18. Gierlinger, S., G. Pollack, F. Hauer and F. Krausmann, 2016. **Metabolism and waterscape in the industrialising city of Vienna**, in: *Agua y Territorio* 2016 (7),109-124. DOI 10.17561/at.v0i7.2966.
 19. Jepsen, R.M., Krausmann, F., et al.2015. **Transitions in European land management regimes between 1800 and 2010**. *Land Use Policy* 49, 53-64.
 20. Greslova, P., Gingrich, S., Krausmann, F., Chromy, P., Jancak, V. 2015. **Social Metabolism of Czech agriculture in the period 1830-2010**. *AUC Geographica* 50(1) 23-35. <http://dx.doi.org/10.14712/23361980.2015.84>
 21. Gingrich, S., Niedertscheider, M., Kastner, T., Haberl, H., Cosor, G., Krausmann, F., Kuemmerle, T., Müller, D., Reith-Musel, A., Rudbeck Jepsen, M., Vadineanu A., Erb, K.H. 2015. **Exploring long-term trends in land use change and aboveground Human Appropriation of Net Primary Production in Europe**. *Land Use Policy* 47, 426-438.
 22. Gingrich, S., Haidvogel, G., Krausmann, F., Preis, S., Garcia-Ruiz, R. 2015, **Providing food while sustaining soil fertility in two pre-industrial alpine agroecosystems**. *Human Ecology* 43 (3), 395-410.
 23. Cunfer, G. and Krausmann, F. 2015. **Adaptation on an Agricultural Frontier: The Socio-Ecological Metabolism of Great Plains Settlement, 1875-1936**. *Journal of Interdisciplinary History* 46 (3), 355-392.
 24. Haas, W., Krausmann, F., Wiedenhofer, D., Heinz, M. 2014. **How circular is the global economy? An assessment of material flows, waste production and recycling in the EU and the world in 2005**. *Journal of Industrial Ecology* 19 (5), 765-777.
 25. Güldner, D., Krausmann, F. and Winiwarter, V. 2015. **From farm to gun and no way back: Habsburg gunpowder production in the 18th century and its impact on agriculture and soil fertility**. *Regional Environmental Change*, online first (10/2014)
 26. West, J., H. Schandl, F. Krausmann, J. Kovanda, T. Hak 2014. **Patterns of change in material use and material efficiency in the successor states of the former Soviet Union**. *Ecological Economics* 105, 211-219.
 27. Haberl, H., Erb, K.H. and Krausmann, F. 2014. **Human Appropriation of Net Primary Production: Patterns, Trends, and Planetary Boundaries**. *Annual Review of Environment and Resources* 39, 363-391.
 28. Schaffartzik, A., Mayer, A., Gingrich, S., Eisenmenger, N., Loy, C. and Krausmann, F. 2014. **The Global Metabolic Transition: Regional Patterns and Trends of Global Material Flows, 1950-2010**. *Global Environmental Change* 26, 87-97
 29. Fischer-Kowalski, M., Krausmann, F., Pallua, I 2014. **A socio-metabolic reading of the Anthropocene: modes of subsistence, population size, and human impact on Earth**. *The Anthropocene Review* 1 (1) 8-33. <http://anr.sagepub.com/content/early/2014/01/08/2053019613518033.full.pdf+html>
 30. Kastner, T., Schaffartzik, A., Eisenmenger, N., Erb, K.H., Haberl, H., Krausmann, F. 2014. **Cropland area embodied in international trade: contradictory results from different approaches -the case of China**. *Ecological Economics* 104, pp. 140-144.
 31. Haberl, H., Erb, K.H., Krausmann, F., Running, S., Searchinger, T.D., Kolby Smith, W., 2013. **Bioenergy: how much can we expect for 2050?** *Environmental Research Letters* Volume 8 Number 3. doi:10.1088/1748-9326/8/3/031004
 32. Wiedenhofer, D., Rovenskaya, E., Haas, W., Krausmann, F., Pallua, I., Fischer-Kowalski, M., 2013. **Is there a 1970s Syndrome? Analyzing Structural Breaks in the Metabolism of Industrial Economies**, *Energy Procedia* 40, 182–191. <http://www.sciencedirect.com/science/article/pii/S1876610213016160>.
 33. Fishman, T., Schandl, H., Tanikawa, H., Walker, P. and Krausmann, F., 2013. **Accounting for the material stocks of nations**. *Journal of Industrial Ecology* (10 APR 2014, DOI: 10.1111/jiec.12114)
 34. Krausmann, F., Richter, R., Eisenmenger, N., 2014. **Resource use in small Island states: Material flows in Iceland and Trinidad and Tobago 1961-2008**. *Journal of Industrial Ecology* 18 (2) 294-305.
 35. Krausmann, F., Schaffartzik, A., Mayer, A., Gingrich, S. and Eisenmenger, A. (2013). **Global trends and patterns in material use**. *MRS Online Proceedings Library*, 1545, <http://dx.doi.org/10.1557/opl.2013.1075>.

36. Steinberger, J.K., Krausmann, F., Getzner, M., Schandl, H., West, J. 2013. **Development and dematerialization: an international study.** *PLoS One*, **8**, doi: [10.1371/journal.pone.0070385](https://doi.org/10.1371/journal.pone.0070385).
37. Krausmann, F., Erb, K.H., Gingrich, S., Haberl, H., Bondeau, A., Gaube, V., Lauk, C., Plutzer, C., Searchinger, T.D. 2013. **Global human appropriation of net primary production doubled in the 20th century.** *PNAS* 110 (10324-10329). (www.pnas.org/cgi/doi/10.1073/pnas.1211349110).
38. Schaffartzik, A., Eisenmenger, N., Krausmann, F., Weisz, H. 2014. **Consumption-Based Material Flow Accounting: Austrian Trade and Consumption in Raw Material Equivalents (RME) 1995-2007.** *Journal of Industrial Ecology* 18 (1) 102-112.
39. Gierlinger S., G. Haidvogel, S. Gingrich & F. Krausmann (2013): **Feeding and Cleaning the city: The role of the urban waterscape in provision and disposal in Vienna during the industrial transformation.** *Water History* 5 (2) 219-239.
40. Hohensinner S., B. Lager, Ch. Sonnlechner, G. Haidvogel, S. Gierlinger, M. Schmid, F. Krausmann & V. Winiwarter (2013): **Changes in water and land: the reconstructed Viennese riverscape 1500 to the present.** *Water History* 5 (2) 145-172.
41. Dullinger, S.; Essl, F.; Rabitsch, W.; Erb, K.; Gingrich, S.; Haberl, H.; Hülber, K.; Jarošík, V.; Krausmann, F.; Kühn, I.; Pergl, J.; Pyšek, P.; Hulme, P. 2013. **Europe's other debt crisis caused by the long legacy of future extinctions.** *PNAS* 110 (18) 7342-7347 ([10.1073/pnas.1216303110](https://doi.org/10.1073/pnas.1216303110)).
42. Erb, K.H., Haberl, H., DeFries, R., Ellis, E.C., Krausmann, F., Verburg, P.H., 2012. **NPP-based planetary boundaries for land use: A moving target.** *Science* (14.12.2012), 1419-1420. [DOI:10.1126/science.338.6113.1419-d].
43. Lauk, C., Haberl, H., Erb, K.-H., Krausmann, F., 2012. **Global socioeconomic carbon stocks and carbon sequestration in long-lived products 1900-2008.** *Environmental Research Letters*. 7(3), 4753-4769.
44. Krausmann, F., S. Gingrich, H. Haberl, K-H. Erb, A. Musel, T. Kastner, N. Kohlheb, M. Niedertscheider, E. Schwarzlmüller, 2012. **Long-term trajectories of the human appropriation of net primary production: Lessons from six national case studies.** In: *Ecological Economics* 77, 129-138.
45. Haberl, H., Steinberger, J., Plutzer, C., Erb, K.-H., Gaube, V., Gingrich, S., and Krausmann, F. (2012): **Natural and socioeconomic determinants of the embodied human appropriation of net primary production and its relation to other resource use indicators.** In: *Ecological Indicators* 23, pp. 222-231.
46. Singh, S. J., Krausmann, F., Gingrich, S., Haberl, H., Erb, K.-H., Lanz, P., 2012. **India's biophysical economy, 1961 – 2008. Sustainability in a national and global context.** In: *Ecological Economics* 76, 60-69.
47. Gierlinger, S. and Krausmann, F., 2012. **The physical economy of the United States of America: Extraction, trade and consumption of materials from 1870 to 2005.** *Journal of Industrial* 16(3) 365-377.
48. Gingrich S., G. Haidvogel & F. Krausmann (2012): **The Danube and Vienna: urban resource use, transport and land use 1800 to 1910.** *Regional Environmental Change* 12 (2), pp 283-294.
49. Haberl, H., Erb, K.-H., Krausmann, F., Bondeau, A., Lauk, C., Müller, C., **Global bioenergy potentials from agricultural land in 2050: Sensitivity to climate change, diets and yields.** *Biomass and Bioenergy*, 35(12), 4753-4769 (2011).
50. Krausmann, F., Gingrich, S., Nourbakhch-Sabet, R., 2011. **The metabolic transition in Japan: A material flow account for the period 1878 to 2005.** *Journal of Industrial Ecology* 15 (6) 877-892.
51. Fischer-Kowalski, M., F.Krausmann, S.Giljum, S.Lutter, A.Mayer, S.Bringezu, Y.Moriguchi, H.Schütz, H. Schandl, H.Weisz. 2011. **Methodology and indicators of economy wide material flow accounting. State of the art and reliability across sources.** *Journal of Industrial Ecology* 15 (6) 855-876.
52. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Martinez-Alier, J., and Winiwarter, V., 2011. **A sociometabolic transition towards sustainability? Challenges for another Great Transformation.** *Sustainable Development* 19(1), 1-14.
53. Steinberger, J. and Krausmann, F. 2011. **Material and energy productivity.** *Environmental Science and Technology* 45 (4) 1169-1176.
54. Essl, F., Dullinger, S., Rabitsch, W., Hulme P.E., Hülber, K., Jarošík V., Kleinbauer, I., Krausmann, F., Kühn, I., Nentwig W., Vilà M., Genovesi, P., Gherardi, F., Desprez-Lusteau,

- A., Roques, A. & Pyšek P. 2010. **Reply to Keller and Springborn: No doubt about invasion debt.** *PNAS* 108 (25) E221.
55. Essl, F., Dullinger, S., Rabitsch, W., Hulme P.E., Hülber, K., Jarošík V., Kleinbauer, I., Krausmann, F., Kühn, I., Nentwig W., Vilà M., Genovesi, P., Gherardi, F., Desprez-Lusteau, A., Roques, A. & Pyšek P. 2011. **Socio-economic legacy yields an invasion debt.** *PNAS* 108, 203-207.
 56. Scheidl, A., Krausmann F. 2011. **Diet, trade and land use: A socio-ecological analysis of the transformation of the olive oil system.** *Land Use Policy* 28. 47-56.
 57. Haberl, H., Erb, KH., Krausmann, F., Bondeau, A., Lauk, C., Müller, C., Plutzer, C., Steinberger, J.K. 2010. **Global bioenergy potentials from agricultural land in 2050: Sensitivity to climate change, diets and yields.** *Biomass & Bioenergy* 35, 4753-4769.
 58. Warr B., Ayres, R., Eisenmenger, N., Krausmann, F. and Schandl, H. 2010: **Energy use and economic development. A comparative analysis of useful work supply in Austria, Japan, the United Kingdom and the USA during 100 years of economic growth.** *Ecological Economics* 69, 1904-1916.
 59. Steinberger, J., Krausmann, F., and Eisenmenger, N., 2010. **The global patterns of materials use: a socioeconomic and geophysical analysis.** *Ecological Economics* 69(5), 1148-1158.
 60. Cunfer, G. and Krausmann, F., 2009: **Sustaining soil fertility: Agricultural practice in the Old and New Worlds,** *Global Environment* 4, 9-43.
 61. Haberl, H., Erb, K.H., Krausmann, F., Berecz, S., Ludwiczek, N., Musel, A., Schaffartzik, A., 2009: **Using embodied HANPP to analyze teleconnections in the global land system: Conceptual considerations,** *Geografisk Tidsskrift – Danish Journal of Geography* 109 (2), 119-130.
 62. Erb, KH., Krausmann F., Gaube, V., Gingrich, S., Bondeau, A., Fischer-Kowalski, M., Haberl, H. 2009: **Analyzing the global human appropriation of net primary production – processes, trajectories, implications. An introduction,** *Ecological Economics* 69 (2), 250-259 ([doi:10.1016/j.ecolecon.2009.07.001](https://doi.org/10.1016/j.ecolecon.2009.07.001)).
 63. Kohlheb, N. and Krausmann F. 2009: **Land use change, biomass production and HANPP: The case of Hungary 1961-2005,** *Ecological Economics* 69 (2), 292-300 ([doi:10.1016/j.ecolecon.2009.07.010](https://doi.org/10.1016/j.ecolecon.2009.07.010)).
 64. Krausmann, F., Gingrich, S., Eisenmenger, N., Erb, K.H., Haberl, H., Fischer-Kowalski, M. 2009. **Growth in global materials use, GDP and population during the 20th century,** *Ecological Economics* 68 (10). 2696-2705 ([doi:10.1016/j.ecolecon.2009.05.007](https://doi.org/10.1016/j.ecolecon.2009.05.007)). [REPRINTED in In : The Costs of Economic Growth, The International Library of Critical Writings in Economics, P., A. Victor (Ed.), Elgar Research Collection p. 421-431]
 65. Erb, KH, Krausmann, F., Lucht, W. and Haberl, H. 2009: **Embodied HANPP: Mapping the spatial disconnect between global biomass production and consumption,** *Ecological Economics* 69 (2), 328-334 ([doi:10.1016/j.ecolecon.2009.06.025](https://doi.org/10.1016/j.ecolecon.2009.06.025)).
 66. Krausmann, F., H. Haberl, K.H. Erb, M. Wiesinger, V. Gaube and S. Gingrich 2008: **What determines geographical patterns of the global human appropriation of net primary production?** *Journal of Land Use Science* 4 (1). 15-34.
 67. Kuskova, P., S. Gingrich, F. Krausmann 2008. **Long term changes in social metabolism and land use in Czechoslovakia, 1830-2000: An energy transition under changing political regimes.** *Ecological Economics*, 68 (1/2), 394-407.
 68. Krausmann, F. and P. Schneider 2008. **Transformationen. Das moderne Energiesystem.** In: *Wissenschaft und Umwelt. Interdisziplinär* 11, 104-110.
 69. Schandl, H., M. Fischer-Kowalski, C. Grünbühel, F. Krausmann 2008. **Socio-metabolic transitions in developing Asia.** *Technological Forecasting and Social Change*, 76(2), 267-281.
 70. Krausmann, F., M. Fischer-Kowalski, H. Schandl, and N. Eisenmenger 2008. **The global socio-metabolic transition: past and present metabolic profiles and their future trajectories.** *Journal of Industrial Ecology* 12(5/6), 637-656.
 71. Erb, K.H., S. Gingrich, F. Krausmann, and H. Haberl 2008. **Austria's carbon metabolism 1830-2000: A comprehensive view on socioeconomic and ecological carbon flows.** *Journal of Industrial Ecology*, 12(5/6), 686-703.
 72. Krausmann, F., K.H. Erb, S. Gingrich, C. Lauk, and H. Haberl 2008. **Global patterns of socioeconomic biomass flows in the year 2000: A comprehensive assessment of supply, consumption and constraints.** *Ecological Economics* 65 (3), 471-487.

73. Krausmann, F., H. Schandl, and R.P. Sieferle 2008. **Socio-ecological regime transitions in Austria and the United Kingdom.** *Ecological Economics* 65 (1), 187-201.
74. Haberl, H., K.H. Erb, C. Plutzer, M. Fischer-Kowalski, and F. Krausmann (2007). **Human appropriation of net primary production (HANPP) as indicator for pressures on biodiversity.** *Ecological Questions* 8/2007: 25-36.
75. Haberl, H., K.-H. Erb, F. Krausmann, V. Gaube, A. Bondeau, C. Plutzer, S. Gingrich, W. Lucht, and M. Fischer-Kowalski (2007). **Quantifying and mapping the human appropriation of net primary production in the Earth's terrestrial ecosystems.** *PNAS* 104, 12942-12947.
76. Erb, K.H., V. Gaube, F. Krausmann, C. Plutzer, A. Bondeau, and H. Haberl (2007). **A comprehensive global 5min resolution land-use dataset for the year 2000 consistent with national census data.** *Journal of Land Use Science* 2(3) 191-224.
77. Gingrich, S., K.H. Erb, F. Krausmann, V. Gaube, and H. Haberl (2007). **Long-term dynamics of terrestrial carbon stocks in Austria. A comprehensive assessment of the time period from 1830 to 2000.** *Regional Environmental Change*. 7(1) 37-47.
78. Kohlhéb, N., F. Krausmann and H. Weisz (2007). **Magyarország társadalmi metabolizmusa.** In: Kovasz, X (4), 21-42.
79. Krausmann, F. (2006). **Die Forest Transition in Österreich: Eine sozialökologische Annäherung.** Mitteilungen der österreichischen Geographischen Gesellschaft, Vol. 148, 75-91.
80. Krausmann F. (2006). **Una perspectiva biofísica del cambio agrícola en Austria: dos sistemas agrarios en las décadas de 1830 y 1990.** In: *Historia Agraria* 40, 293-311.
81. Krausmann F. and H. Schandl (2006). **Der soziale Metabolismus der Industrialisierung. Die Überwindung der energetischen Schranken des agrarischen Wirtschaftens.** In: *GAIA* 15 (4) 285-293.
82. Haberl, H., V. Winiwarter, K. Andersson, R. U. Ayres, C. Boone, A. Castillo, G. Cunfer, M. Fischer-Kowalski, W. R. Freudenburg, E. Furman, R. Kaufmann, F. Krausmann, E. Langthaler, H. Lotze-Campen, M. Mirtl, C. L. Redman, A. Reenberg, A. Wardell, B. Warr and H. Zechmeister 2006. **From LTER to LTSER: Conceptualizing the Socioeconomic Dimension of Long-term Socioecological Research.** *Ecology and Society* 11 (2): 13. [online] URL: <http://www.ecologyandsociety.org/vol11/iss2/art13/>
83. Weisz, H., Krausmann, F., Amann, C., Eisenmenger, N., Erb, K.-H., Fischer-Kowalski, M., Hubacek K., (2006): **The physical economy of the European Union: Cross-country comparison and determinants of material consumption.** In: *Ecological Economic* 58, 676-698.
84. Haberl, H., Weisz, H., Amann, C., Bondeau, A., Eisenmenger, N., Erb, K.H., Fischer-Kowalski, M., Krausmann, F. 2006. **The energetic metabolism of societies: Energy inputs of the EU-15 and the USA.** *Journal of Industrial Ecology*, 10 (4), 151-171.
85. Fischer-Kowalski, M., Krausmann, F. and Smetschka, B. (2004): **Modelling scenarios of transport across history from a socio-metabolic perspective.** *Review. A Journal of the Fernand Braudel Center for the Study of Economic, Historical Systems, and Civilizations*. Vol. XXVII (4), 307-342.
86. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Weisz, H., and Winiwarter, V. (2004): **Progress Towards Sustainability? What the conceptual framework of material and energy flow accounting (MEFA) can offer.** *Land Use Policy* 21(3), 199-215.
87. Haberl, H., Wackernagel, M., Krausmann, F., Erb, K.-H., and Monfreda, C. (2004): **Ecological footprints and human appropriation of net primary production: A comparison.** *Land Use Policy* 21(3), 279-289.
88. Krausmann, F., Haberl, H., Erb, K.-H., and Wackernagel, M. (2004): **Resource flows and land use in Austria 1950-2000: Using the MEFA framework to monitor society-nature interaction for sustainability.** *Land Use Policy* 21(3), 215-231.
89. Wackernagel, M., Monfreda, C., Schulz, N. B., Erb, K.-H., Haberl, H., and Krausmann, F. (2004): **Calculating national and global ecological footprint time series: Resolving conceptual challenges.** *Land Use Policy* 21(3) 271-279.
90. Krausmann, F. (2004): **Milk, manure and muscle power. Livestock and the transformation of preindustrial agriculture in Central Europe.** *Human Ecology* 32(6), 735-773.
91. Haberl, H., Schulz, N.B., Plutzer, C., Erb, K.H., Krausmann, F., Loibl, W., Moser, D., Sauberer, N., Weisz, H., Zechmeister, H., Zulka, P. (2004) **Human Appropriation of Net Primary**

- Production and Species Diversity in Cultural Landscapes: Empirical Analysis for an Austrian Transect.** *Agriculture, Ecosystems and Environment* 102(2), 213-218.
92. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Schandl, H., Weisz, H. and Winiwarter, V., 2003. **Theoretische Grundlagen für die gesellschaftliche Beobachtung nachhaltiger Entwicklung am Beispiel langfristiger Veränderungen der Landnutzung.** *Die Bodenkultur* 53, 55-65.
 93. Haberl, H., Krausmann, F., Erb, K. H., Schulz, N.B. 2002. **Human Appropriation of Net Primary Production.** *Science* 296, 1968-1969.
 94. Krausmann, F., Haberl, H., Schulz, N., Erb, K.-H., Darge, E., Gaube, V., 2003. **Land-Use Change and Socio-Economic Metabolism in Austria, Part I: Socio-Economic Driving Forces of Land-Use Change 1950-1995.** *Land Use Policy* 20, 1-20.
 95. Haberl, H., Erb, K.-H., Krausmann, F., Adensam, H., Schulz, N., 2003. **Land-Use Change and Socio-Economic Metabolism in Austria, Part II: Land-Use Scenarios 1995-2020.** *Land Use Policy* 20, 21-39.
 96. Weisz, H., Fischer-Kowalski, M., Grünbühel, C.M., Haberl, H., Krausmann, F. and Winiwarter, V., 2001. **Global Environmental Change and Historical Transitions.** *Innovation* 14, 117-143.
 97. Krausmann, F. und Haberl, H. 2002. **The process of Industrialization from an energetic metabolism point of view. Socio-economic energy flows in Austria 1830-1995.** *Ecological Economics* 41, 177-201.
 98. Krausmann, F., 2001. **Land Use and Industrial Modernization. An empirical analysis of human influence on the functioning of ecosystems in Austria 1830-1995.** *Land Use Policy* 18, 17-26.
 99. Haberl, H. and Krausmann, F., 2001. **Changes in Population, Affluence and Environmental Pressures During Industrialization. The Case of Austria 1830-1995.** *Population and Environment* 23/1, 49-69.
 100. Haberl, H., Erb, K.-H., Krausmann, F., Loibl, W., Schulz, N. and Weisz, H., 2001. **Changes in Ecosystem Processes Induced by Land Use: Human Appropriation of Net Primary Production and Its Influence on Standing Crop.** *Global Biogeochemical Cycles* 15, 929-942.
 101. Haberl, H., Erb, K.-H. and Krausmann, F., 2001. **How to calculate and interpret ecological footprints for long periods of time: The case of Austria 1926-1995.** *Ecological Economics* 38, 25-45.
 102. Krausmann, F., 2000. **Landnutzung, Energie und industrielle Modernisierung. Eine historische Perspektive mit Blick in die Zukunft.** *Natur und Kultur* 1, 44-62.

Contributions to books:

1. Krausmann, F., Fischer-Kowalski, M. 2017. **Transitions socio-métaboliques globales.** In: Allaire, Gilles, and Benoit Daviron (eds.). *Transformations agricoles et agroalimentaires: entre écologie et capitalisme.* Quae, 2017. p. 23-40.
2. Haberl, H., Erb, K.H., Krausmann F., Niederscheider, M. 2017. **Global energy transitions: a long-term socioeconomic metabolism perspective.** In: Calbert, K. and Solomon, B. *Handbook on the Geographies of Energy,* Edward Elgar, p. 393-410.
3. Krausmann, F. 2017. **Social Metabolism.** In: Clive L. Spash (editor), *The Routledge Handbook of Ecological Economics: Nature and Society.* Abingdon, Routledge. p.108-118.
4. UNEP (2016). **Global Material Flows and Resource Productivity. An Assessment Study of the UNEP International Resource Panel.** Heinz Schandl, Marina Fischer-Kowalski, James West, Stefan Giljum, Monika Dittrich, Nina Eisenmenger, Arne Geschke, Mirko Lieber, Hanspeter Wieland, Anke Schaffartzik, Fridolin Krausmann, Sylvia Gierlinger, Karin Hosking, Manfred Lenzen, Hiroki Tanikawa, Alessio Miatto, Tomer Fishman. Paris, United Nations Environment Programme
5. Haberl, H., Erb, K.H., Fischer-Kowalski, M., Groß, R., Krausmann, F., Plutzer, C., Schmid, M., Winiwarter, V. 2016. **Introduction.** In: *Social Ecology: Society-Nature Relations Across Time And Space.* Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.

6. Gingrich, S., Lauk, C., Kastner, T., Krausmann, F., Haberl, H., Erb, K.H. 2016. **A Forest Transition: Austrian Carbon Budgets 1830–2010**. In: Social Ecology: Society-Nature Relations Across Time And Space. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.
7. Krausmann, F., 2016. **From Energy Source to Sink: Transformations of Austrian Agriculture**. In: Social Ecology: Society-Nature Relations Across Time And Space. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.
8. Krausmann, F., Weisz, H., Eisenmenger, N. 2016. **Transitions in Socio-Metabolic Regimes Through Human History**. In: Social Ecology: Society-Nature Relations Across Time And Space. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.
9. Krausmann, F., Schaffartzik, A., Mayer, A., Eisenmenger, N., Gingrich, S., Haberl, H., Fischer-Kowalski, M. 2016. **Long-Term Trends in Global Material and Energy Use**. In: Social Ecology: Society-Nature Relations Across Time And Space. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.
10. Mayer, A., Schaffartzik, A., Krausmann, F., Eisenmenger, N. 2016. **More Than the Sum of its Parts: Patterns in Global Material Flows**. In: Social Ecology: Society-Nature Relations Across Time And Space. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.
11. Haas, W., Heinz, M., Krausmann, F., Wiedenhofer, D. 2016. **How Circular is the Global Economy? A Socio-Metabolic Analysis**. In: Social Ecology: Society-Nature Relations Across Time And Space. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.
12. Niedertscheider, M., Fetzl, T., Haberl, H., Krausmann, F., Gaube, V., Gingrich, S., Lauk, C., Plutzer, C., Erb, K.H., 2016. **Africa's Land System Trajectories 1980–2005**. In: Social Ecology: Society-Nature Relations Across Time And Space. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.
13. Plutzer, C., Erb, K.H., Gaube, V., Haberl, H., Krausmann, F., 2016. **Of Birds and Bees: Biodiversity and the Colonization of Ecosystems**. In: Social Ecology: Society-Nature Relations Across Time And Space. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.
14. Kastner, T., Erb, K.H., Krausmann, F., 2016. **The Philippines 1910–2003: A Century of Transitions**. In: Social Ecology: Society-Nature Relations Across Time And Space. Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (editors), Human-Environment Interactions, Springer International Publishing, Switzerland.
15. Krausmann, F., Langthaler, E., 2016. **Nahrungsregime und Umwelt in der Globalisierung (1870–2010)**. In: Fischer, K., Jäger, J., Schmidt, L. (Hrsg.), Rohstoffe und Entwicklung. Aktuelle Auseinandersetzungen im historischen Kontext. Historische Sozialkunde / Internationale Entwicklung, Band 35, p. 85-103. New Academic Press, Wien.
16. Fischer-Kowalski, Krausmann, Mayer, Schaffartzik (2014). **Boserup's theory on technological change as point of departure for the theory of sociometabolic regime transitions**. In: M. Fischer-Kowalski, A. Reenberg, A. Schaffartzik, A. Mayer (Eds.): Ester Boserup's Legacy on Sustainability, p23-44. Springer, New York.
17. Hak, T., Kovanda, J., West, J., Schandl, H., Krausmann, F. (2013): **Resource Efficiency: Economics and Outlook for Eastern Europe, Caucasus and Central Asia (REEO for EECCA)**. United Nations Environment Program, Paris.
18. Neundlinger M., S. Gierlinger, G. Pollack & F. Krausmann (2014): **Viennese Waters and Sanitation Systems from Roman to Modern Times**. In: Tvedt T. & T. Oestigaard (eds.): From Jericho to Cities in the Seas. A History of Urbanization and Water Systems. A History of Water, Series 3, Vol. 1. (I.B. Tauris, London).
19. Haberl, H., Erb, K.H., Gingrich, S., Kastner, F., Krausmann, F. (2013). **Human Appropriation of Net Primary Production, Stocks and Flows of Carbon, and Biodiversity**. In: Lal, R.; Lorenz, K.; Hüttl, R.F.; Schneider, B.U.; von Braun, J. (Eds.), Ecosystem Services and Carbon Sequestration in the Biosphere, Chapter 14, 313-331, Springer, New York.
20. Krausmann, F., Gingrich, S., Eisenmenger, N., Erb, K.H., Haberl, H., Fischer-Kowalski, M. 2013. **Growth in global materials use, GDP and population during the 20th century**.

- In: P.A. Victor (Ed.): The Costs of Economic Growth, The International Library of Critical Writings in Economics, Elgar Research Collection p. 421-431. [Reprinted from *Ecological Economics* 68 (10). 2696-2705 ([doi:10.1016/j.ecolecon.2009.05.007](https://doi.org/10.1016/j.ecolecon.2009.05.007)).]
21. Haberl, H., K.H. Erb, F. Krausmann, 2013. **Global human appropriation of net primary production (HANPP)**. In: P.A. Victor (Ed.): The Costs of Economic Growth, The International Library of Critical Writings in Economics, Elgar Research Collection p. 304-319. [Reprinted from Cutler J. Cleveland (Eds.): *Encyclopedia of Earth*. =online:[http://www.eoearth.org/article/Global_human_appropriation_of_net_primary_production_\(HANPP\)](http://www.eoearth.org/article/Global_human_appropriation_of_net_primary_production_(HANPP)).
 22. Krausmann, F. 2013. **The social metabolism of European industrialization: Changes in the relation of energy and land use from eighteenth to the twentieth century**. In: Richard W. Unger (Ed.) *Energy Transitions in History: Global Cases of Continuity and Change, RCC perspectives 2013/02*, Rachel Carson Centre, Munich, pp. 31-36.
 23. Rogner, H.-H., Aguilera, R. F., Archer, C. L., Bertani, R., Bhattacharya, S. C., Bryden, I., Charpentier, R. R., Dusseault, M. B., Gagnon, L., Goswami, Y., Haberl, H., Hoogwijk, M., Johnson, A., Odell, P., Wagner, H., Yakushev, V., Arent, D., Bryden, J., Krausmann, F., Schilling, C., and Shafiei, A. (2012): **Energy Resources and Potentials**. In: Gomez-Echeverri, L. Johansson, T.B., Nakicenovic, N. and Patwardhan, A. (Eds.): *Global Energy Assessment: Toward a Sustainable Future*. Laxenburg, Cambridge, UK: IIASA and Cambridge University Press, pp. 425-512. GEA, 2012: *Global Energy Assessment – Toward a Sustainable Future*, Cambridge University Press, Cambridge UK and New York, NY, USA and the International Institute for Applied Systems Analysis, Laxenburg, Austria (co-author of Chapter 7. Energy Resources and Potentials and Chapter 20. Land and Water: Linkages to Bioenergy)
 24. Coelho, S.T., Agbenyega, O., Agostini, A., Erb, K.-H., Haberl, H., Hoogwijk, M., Rattan, L., Dos Santos Lucon, O., Masera, O., Moreira, J.R., Björklund, G., Krausmann, F., Msangi, S., and Plutzar, C. (2012). **Land and Water: Linkages to Bioenergy**. In: Gomez-Echeverri, L., Johansson, T.B., Nakicenovic, N. and Patwardhan, A. (Eds.), *Global Energy Assessment: Toward a Sustainable Future*. Laxenburg, Cambridge, UK: IIASA and Cambridge University Press, pp. 1459-1526
 25. Erb, K.-H., Mayer, A., Krausmann, F., Lauk, C., Plutzar, C., Steinberger, J. K., Haberl, H., 2012. **The interrelations of future global bioenergy potentials, food demand and agricultural technology**. In: Gasparatos, A. and Stromberg, P. (Eds.), *Socioeconomic and environmental impacts of biofuels: Evidence from developing nations*. Cambridge, Cambridge University Press, pp. 27-52.
 26. Krausmann, F., Fischer-Kowalski M. 2013. **Global Metabolic Transitions**. In: Singh, S., Haberl, H., Chertow, M., Mirtl, M., Schmid, M. 2013. *Long Term Socio-Ecological Research: Studies in Society-Nature Interactions Across Spatial and Temporal Scales*. Springer, New York, pp. 339-368.
 27. Cunfer, G., Krausmann, F. 2013. **Sustaining Soil Fertility in the Old and New Worlds**. In: Singh, S., Haberl, H., Chertow, M., Mirtl, M., Schmid, M. 2013. *Long Term Socio-Ecological Research: Studies in Society-Nature Interactions Across Spatial and Temporal Scales*. Springer, New York, pp. 269-296.
 28. Krausmann, F. 2012. **A City and its Hinterland: Vienna's Energy Metabolism 1800-2000**. In: Singh, S., Haberl, H., Chertow, M., Mirtl, M., Schmid, M. 2013. *Long Term Socio-Ecological Research: Studies in Society-Nature Interactions Across Spatial and Temporal Scales*. Springer, New York, pp. 247-268
 29. Fischer-Kowalski, M., Smetschka, B., Krausmann, F. 2013. **Modelling transport as a key constraint to urbanization in pre-industrial societies**. In: Singh, S., Haberl, H., Chertow, M., Mirtl, M., Schmid, M. 2013. *Long Term Socio-Ecological Research: Studies in Society-Nature Interactions Across Spatial and Temporal Scales*. Springer, New York, pp. 77-102.
 30. Gingrich, S., Schmid, M., Krausmann, F., Gradwohl, M. 2013. **How Material and Energy Flows Change Socio-natural Arrangements: The Transformation of Agriculture in the Eisenwurzen Region, 1860–2000**. In: Singh, S., Haberl, H., Chertow, M., Mirtl, M., Schmid, M. 2013. *Long Term Socio-Ecological Research: Studies in Society-Nature Interactions Across Spatial and Temporal Scales*. Springer, New York, pp. 217-314.
 31. Winiwarter, V., Gerzabek, M.H., Baumgarten A., Blum, W.E.H., Butterbach-Bahl, K., Cushman, G., Englisch, M., Feller, C., Fiebig, M., Frossard, E., Haberl, H., Heinzlmaier, F., Huber, S., Kandeler, E., Katzensteiner, K., Kaul, H.P., Krausmann, F., Langthaler, E., Marland, G., Showers, K.B., Spiegel, H., Winiwarter, W. 2012. **Endangered Soils: A long-term view of the natural and social ramifications of biomass production in agriculture and**

- forestry.** In: : V. Winiwarter and M. H. Gerzabek, The challenge of sustaining soils: Natural and social ramifications of biomass production in a changing world. P. 12-47, Verlag der österr. Akademie der Wissenschaftenm Wien
32. Winiwarter, V., Gerzabek, M.H., Baumgarten A., Blum, W.E.H., Butterbach-Bahl, K., Cushman, G., Englisch, M., Feller, C., Fiebig, M., Frossard, E., Haberl, H., Heinzlmaier, F., Huber, S., Kandeler, E., Katzensteiner, K., Kaul, H.P., Krausmann, F., Langthaler, E., Marland, G., Showers, K.B., Spiegel, H., Winiwarter, W. 2012. **Productive Soils, Global Environmental Cycles and Energy Crops.** In: V. Winiwarter and M. H. Gerzabek . The challenge of sustaining soils: Natural and social ramifications of biomass production in a changing world. P. 48-71, Verlag der österr. Akademie der Wissenschaftenm Wien
 33. UNEP, 2011. **Decoupling Natural Resource Use and Environmental Impacts from Economic Growth.** A Report of the Working Group on Decoupling to the International Resource Use Panel. Fischer-Kowalski, M., Swilling, M., Weizsäcker, E.U., Ren, Y., Moriguchi, Y., Crane, W., Krausmann, F., Eisenmenger, N., Giljum, S., Hennicke, P., Romero Lankao, P., Siriban Manalang, A., United Nations Environment Programme (UNEP), Nairobi.
 34. Krausmann, F. 2012. **Global Material Flows.** In: Ginley, D. and Gahen, D. *Fundamentals of Materials for Energy and Environmental Sustainability.* Cambridge University Press, Cambridge, p. 81-90.
 35. Krausmann, F. 2010. **Vom Solarzeitalter zur fossilen Energieversorgung. Der Stoffwechsel der Industriegesellschaft.** In: Stiftung Brandenburger Tor (Ed). *Energie gleich Arbeit. Nachdenken über das, was die Welt in Bewegung hält Acht Essays zum Thema Energie.* Nicolai Verlag, Berlin, p. 22-28.
 36. Krausmann, F., Fischer-Kowalski M. 2010. **Gesellschaftliche Naturverhältnisse. Globale Transformationen der Energie und Materialflüsse.** In: Sieder, R. and Langthaler, E. *Globalgeschichte 1800-2010.* Böhlau: Wien, p. 39-68.
 37. Krausmann, F. Fischer-Kowalski M., Schandl H. 2010. **Out of the frying pan into the fire: Industrialization as a socio-ecological transition process.** In: *Environmental History. As if nature existed. Ecological Economics and Human Wellbeing Serie,* edited by John R McNeill, Jose Augusto Padua, and Mahesh Rangarajan, Delhi:Oxford University Press, 26-48.
 38. Krausmann, F., 2008. **Die Landwirtschaft Niederösterreichs in sozialökologischer Perspektive.** In: Melichar, P., Langthaler, E. and Eminger, S. (Eds.), *Niederösterreich im 20. Jahrhundert. Band 2: Wirtschaft.* Böhlau, Wien, pp. 261-269.
 39. Krausmann, F. and H. Haberl, 2007. **Land-use change and socioeconomic metabolism. A macro view of Austria 1830-2000.** In: Fischer-Kowalski, M., Haberl. H. *Socioecological Transitions and Global Change. Trajectories of Social Metabolism and Land Use. pp31-59.* Edward Elgar: Cheltenham.
 40. Erb, K.H., H. Haberl and F. Krausmann, 2007. **The fossil fuel-powered carbon sink. Carbon flows and Austria's energetic metabolism in a long-term perspective.** In: Fischer-Kowalski, M., Haberl. H. *Socioecological Transitions and Global Change. Trajectories of Social Metabolism and Land Use. Pp.60-82.* Edward Elgar: Cheltenham.
 41. Schandl, H., F.Krausmann and M. Fischer-Kowalski, 2007. **The Great Transformation: A socio-metabolic reading of the industrialization of the United Kingdom.** In: Fischer-Kowalski, M., Haberl. H. *Socioecological Transitions and Global Change. Trajectories of Social Metabolism and Land Use. pp.83-115.* Edward Elgar: Cheltenham.
 42. Haberl, H. and F. Krausmann, 2007. **The local base of the historical agrarian-industrial transition and the interaction between scales.** In: Fischer-Kowalski, M., Haberl. H. *Socioecological Transitions and Global Change. Trajectories of Social Metabolism and Land Use.* Edward Elgar: Cheltenham.
 43. Fischer-Kowalski, M., H. Haberl and F. Krausmann, 2007. **Conclusions: Likely and unlikely pasts, possible and impossible futures.** In: Fischer-Kowalski, M., Haberl. H. *Socioecological Transitions and Global Change. Trajectories of Social Metabolism and Land Use. pp.223-256.* Edward Elgar: Cheltenham.
 44. Haberl, H., Erb, K.H., Plutzar, C., Fischer-Kowalski, M. and Krausmann, F. 2007. **Human Appropriation of Net Primary Production (HANPP) as an Indicator for Pressures on Biodiversity.** In: Hak, T., Moldan, B., Lyon Dahl, A. *Sustainability Indicators. A scientific assessment.* Scope 67. pp. 271-288. Island Press: Washington.
 45. Krausmann F. (2006). **Die Agrarmodernisierung als sozial-ökologischer Transformationsprozess: Fallbeispiel Österreich.** In: A. Dix und E. Langthaler (Ed.)

Grüne Revolutionen: Agrarsysteme und Umwelt im 19. und 20. Jahrhundert. *Jahrbuch für die Geschichte des Ländlichen Raumes* 2006, 17-46.

46. Krausmann, F. 2006. **Industrialization**. In: Geist, H. Our Earth's Changing Land. An Encyclopedia of Land-Use and Land-Cover Change. S. 304-308. Greenwood Press: Westport.
47. Krausmann, F. 2006. **West-Central Europe**. In: Geist, H. Our Earth's Changing Land. An Encyclopedia of Land-Use and Land-Cover Change. S. 656-659. Greenwood Press: Westport.
48. Krausmann, F., 2005. **Sonnenfinsternis? Wiens Energiesystem im 19. und 20. Jahrhundert**. In: Brunner, K. und Schneider, P.: Umwelt Stadt. Geschichte des Natur- und Lebensraumes Wien. s. 140-150. Böhlau Verlag, Wien.
49. Krausmann, F., Schandl, H. and Schulz, N. 2003. **Vergleichende Untersuchung zur Langfristigen Entwicklung von gesellschaftlichem Stoffwechsel und Landnutzung in Österreich und im Vereinigten Königreich**. In: Siefert R.P. und H. Breuninger: Der Europäische Sonderweg, Band 11. Stuttgart: Breuninger Stiftung.
50. Krausmann, F. 2001. **Rekonstruktion der Entwicklung von Materialflüssen im Zuge der Industrialisierung: Veränderungen im sozioökonomischen Biomassemetabolismus in Österreich von 1830 bis 1998**. In: Siefert R.P. und H. Breuninger: Der Europäische Sonderweg, Band 4. Stuttgart: Breuninger Stiftung.
51. Krausmann, F. und H. Weisz. 1999. **Landschaft, Landnutzung und industrielle Modernisierung**. In: H. Haberl und G. Strohmeier: Kulturlandschaftsforschung. IFF-Texte 5. Springer Verlag Wien, New York.
52. Krausmann, F. and W. Konrad 1998: **Umweltbelastungen des Wirtschaftswachstums**. In: Zukunftskommission der Friedrich-Ebert-Stiftung (Hrsg.): Wirtschaftliche Leistungsfähigkeit, sozialer Zusammenhalt, ökologische Nachhaltigkeit. Ditz, Bonn.

Other publications incl. selected conference proceedings and reports:

1. Schaffartzik, A., Eisenmenger, N., Krausmann, F., Milota, E., 2015. **Ressourcennutzung in Österreich – Bericht 2015**, Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft and Bundesministerium für Wissenschaft, Forschung und Wirtschaft (Ed.)Wien.
2. Schaffartzik, A., Eisenmenger, N., Krausmann, F., Milota, E., 2015. **Resource Use in Austria – Report 2015**, Austrian Federal Ministry of Agriculture, Forestry Environment and Water Management, Austrian Federal Ministry of Science, Research and Economy (eds.).
3. Tello, E., Galán, E., Cunfer, G., Guzmán-Casado, G.I., Gonzales de Molina, M., Krausmann, F., Gingrich, S., Sacristán, V., Marco, I., Padró, R., Moreno-Delgado, D. 2015. **A proposal for a workable analysis of Energy Return On Investment (EROI) in agroecosystems. Part I: Analytical approach**. Social Ecology Working Paper 156, Inst. of Social Ecology, Vienna.
4. Haas, W., Krausmann, F. 2015. **Rural Metabolism: Material flows in an Austrian village in 1830 and 2001**. Social Ecology Working Paper 155, Inst. of Social Ecology, Vienna.
5. Krausmann, F., Weisz, H., Eisenmenger, N., Schütz, H., Haas, W., Schaffartzik, A. 2015. **Economy-wide Material Flow Accounting. Introduction and guide**. Social Ecology Working Paper 151. Inst. of Social Ecology, Wien.
6. Fischer-Kowalski, M., Krausmann, F., Pallua, I., Heinz, M. 2014. **The role of social revolutions in major historical energy transitions**. In: Fischer-Kowalski, M., Hausknot, D. (Hg.), Large scale societal transitions in the past. The Role of Social Revolutions and the 1970s Syndrome. Social Ecology Working Paper 152, p.13-37. Inst. of Social Ecology, Vienna.
7. Krausmann, F., Schaffartzik, A., Mayer, A., Eisenmenger, N., Gingrich, S., Haberl, H., Fischer-Kowalski, M. and La Revue Durable. 2014. **La société industrielle ne connaît aucune dématérialisation depuis le XIX^e siècle**. La Revue Durable 53, 22-24.
8. Fischer-Kowalski, M., Hausknot, D., Wiedenhofer, D., Krausmann, F., Possanner, N. 2014. **The 1970s Syndrome: Structural change from rising to stagnating energy consumption in mature industrial economies**. In: Fischer-Kowalski, M., Hausknot, D. (Hg.), Large scale societal transitions in the past. The Role of Social Revolutions and the

- 1970s Syndrome. Social Ecology Working Paper 152, p.38-60. Inst. of Social Ecology, Vienna.
9. Krausmann, F. 2014. **Gesellschaftlicher Stoffwechsel, Biomasse und Nachhaltige Entwicklung. Eine globale Perspektive auf Potenziale und Limitationen der Nutzung von Biomasse.** In: Soziale Technik, 1/2014, 2-4.
 10. Schaffartzik, A., Eisenmenger, N., Krausmann, F., Weisz, H. 2013. **Raw Material Equivalents (RME) of Austria's Trade.** Social Ecology Working Paper 125. Inst. of Social Ecology, Wien.
 11. Krausmann, F., 2013. **Gesellschaftlicher Stoffwechsel. Langfristige Trends und räumliche Muster in der Ressourcennutzung.** In: Österreich in Geschichte und Literatur, 57 (1), 61-72.
 12. Fetzel, T., Niedertscheider, M., Erb, K.-H., Gaube, V., Gingrich, S., Haberl, H., Krausmann, F., Lauk, C., Plutzer, C., 2012. **Human appropriation of net primary production in Africa: Patterns, trajectories, processes and policy implications.** Social Ecology Working Paper 137. Inst. of Social Ecology, Wien.
 13. Fetzel, T., Niedertscheider, M., Erb, K.-H., Gaube, V., Gingrich, S., Haberl, H., Krausmann, F., Lauk, C., and Plutzer, C. (2012): **Human Appropriation of Net Primary Production in Africa: Patterns, trajectories, processes and policy implications.** Paper commissioned by UNCTAD. Geneva: UNCTAD
 14. Krausmann, Fridolin, Fischer-Kowalski, Marina, Schaffartzik, Anke, Steinberger, Julia K., Eisenmenger, Nina, und Weisz, Ulli (2011): **Trends and Developments of the Use of Natural Resources in the European Union.** Vienna: IFF Social Ecology (Social Ecology Working Paper; 123).
 15. Krausmann, Fridolin (2011). **The global metabolic transition: a historical overview. In: The socio-metabolic transition. Long term historical trends and patterns in global material and energy use.** Vienna: IFF Social Ecology, Social Ecology Working Paper, S. 73-98.
 16. Krausmann, Fridolin, Gingrich, Simone, und Nourbakhch-Sabet, Reza (2011). **The metabolic transition in Japan: A material flow account for the period 1878 to 2005.** In: Krausmann, F. (Hg.): The socio-metabolic transition. Long term historical trends and patterns in global material and energy use. Vienna: IFF Social Ecology, Social Ecology Working Paper, S. 4-23.
 17. Gierlinger, Sylvia und Krausmann, Fridolin (2011). **The physical economy of the United States of America: Extraction, trade and consumption of materials from 1870 to 2005.** In: Krausmann, F. (Hg.): The socio-metabolic transition. Long term historical trends and patterns in global material and energy use. Vienna: IFF Social Ecology, Social Ecology Working Paper, S. 24-49.
 18. Singh, Simron J., Krausmann, Fridolin, Gingrich, Simone, Haberl, Helmut, Erb, Karl-Heinz, und Lanz, Peter (2011). **India's biophysical economy, 1961 - 2008. Sustainability in a national and global context. In: Krausmann, F. (Hg.): The socio-metabolic transition. Long term historical trends and patterns in global material and energy use.** Vienna: IFF Social Ecology, Social Ecology Working Paper, S. 50-73.
 19. Eisenmenger, Nina, Schaffartzik, Anke, Krausmann, Fridolin, und Milota, Eva (2011). **Ressourcennutzung in Österreich.** Wien: Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft, Bundesministerium für Wirtschaft, Familie und Jugend.
 20. Fischer-Kowalski, Marina, Swilling, Mark, Weizsäcker, Ernst U. v., Crane, Wendy, Siriban-Manalang, Anna B., Ren, Yong, Moriguchi, Yuichi, Krausmann, Fridolin, Eisenmenger, Nina, Giljum, Stefan, Lankao, P. R., und Kemp, Rene (2011). **Decoupling the use of natural resources and environmental impacts from economic activity: Scoping the challenges.** Nairobi: United Nations Environment Programme.
 21. Fischer-Kowalski, M., Krausmann, F., Steinberger, J.K., Ayres, B.U. 2010. **Towards a low carbon society: Setting targets for a reduction of global resource use.** Vienna: Social Ecology Working Paper No. 115.
 22. Krausmann, F., Fischer-Kowalski M. 2009. **Gesellschaftliche Naturverhältnisse: Energiequellen und die globale Transformation des gesellschaftlichen Stoffwechsels.** Vienna: Social Ecology Working Paper No. 117.
 23. Erb, K.-H., Haberl, H., Krausmann, F., Lauk, C., Plutzer, C., Steinberger, J. K., Müller, C., Bondeau, A., Waha, K., Pollack, G. 2009. **Eating the planet: Feeding and fuelling the world sustainably, fairly and humanely, a scoping study.** Vienna: Social Ecology Working Paper No. 116.

24. Singh, S.J., Ringhofer, L., Krausmann, F., Haas, W., Lauck, C., Fischer-Kowalski, M. 2010. **Local studies manual. A researchers guide for investigating the social metabolism of rural local systems.** Vienna: Social Ecology Working Papers No. 120.
25. Haberl, H., K.-H. Erb, F. Krausmann, V. Gaube, S. Gingrich, C. Plutzer, 2009. **Quantification of the intensity of global human use of ecosystems for biomass production.** Background note to the World Development Report 2010. Development and Climate Change. The World Bank <http://go.worldbank.org/WNGE8JFO00>
26. Gingrich, S., F. Krausmann, 2008. **Der soziale Metabolismus lokaler Produktionssysteme: Reichraming in der oberösterreichischen Eisenwurzen 1830-2000.** Vienna: Social Ecology Working Paper No. 107.
27. Krausmann, F., 2008. **Land use and socioeconomic metabolism in pre-industrial agricultural systems: Four nineteenth century Austrian villages in comparison.** Vienna: Social Ecology Working Paper No. 72
28. Haberl, H., K.H. Erb, F. Krausmann, 2008. **Global human appropriation of net primary production (HANPP).** In: Cutler J. Cleveland (Eds.): *Encyclopedia of Earth*. Online: [http://www.eoearth.org/article/Global_human_appropriation_of_net_primary_production_\(HANPP\)](http://www.eoearth.org/article/Global_human_appropriation_of_net_primary_production_(HANPP)). [REPRINTED in In : The Costs of Economic Growth, The International Library of Critical Writings in Economics, P., A. Victor (Ed.), Elgar Research Collection p. 304-319].
29. Haberl, H., K.H. Erb, F. Krausmann, 2007. **Human Appropriation of net primary production.** In: E. Neumayer. *Online Encyclopedia for Ecological Economics*. The International Society for Ecological Economics. Online: http://www.ecoeco.org/education_encyclopedia.php
30. Krausmann, F. 2006. **A City and its Hinterland: The Social Metabolism of Vienna, 1800-2000.** Proceedings of the 4th International Roundtable on Urban Environmental History, 19th and 20th Century: *Milieu, Material and Materiality of European Cities in the 19th and 20th Century*. Paris 16-18 November 2006. Le Centre d'Histoire des Techniques et de l'Environment, CNAM-EHESS.
31. Krausmann, F. and H. Schandl 2006. **Historische Nachhaltigkeitsforschung: Industrialisierung als sozialökologischer Regimewechsel.** In: *Ökologisch Wirtschaften* 4/2006, 30-34.
32. Kratochvil Ruth, Eisenmenger Nina, Krausmann Fridolin, Baart Iris, Colard Armand, Ehgartner Christina, Eichinger Mathias, Hempel Gilles, Lehrner Andreas, Müllauer Richard, Nourbakhch-Sabet Reza, Paler Michael, Patsch Benno, Rieder Franziska, Schembera Eva, Schieder Wolfgang, Schmiedl Clemens, Schwarzlmüller Elmar, Stadler Walter, Wirl Clemens, Zandl Stefan, Zika Michael. 2005. **Materialflüsse in den USA, Saudi Arabien und der Schweiz.** IFF-Social Ecology Working Paper Nr. 74, IFF, Vienna.
33. Fischer-Kowalski, M. and F. Krausmann 2005. **A Socio-ecological View on Industrialization in Europe since the 19th Century.** In: IHDP Update. Newsletter of the International Human Dimensions Program on Global Environmental Change. Issue 02/2005, 6-7.
34. Krausmann, F. 2004. **The Transformation of European Land Use Systems during Industrial Modernization. A Biophysical Analysis of the Development of Austrian Villages since 1830.** In: Lyubina, T., Leontieva, T.G., Bogdanov, S.V. *Regional Tendencies of the Interaction of Human Beings and Nature in the Process of the Transition from Agrarian to Industrial Society*. Tver, Russia. (in Russian Language).
35. Haberl, H., Erb, K.-H., Krausmann, F. 2003. **Global Environmental Pressures, Local Economic Benefit: Relating Austria's Socio-Economic Metabolism and Territory.** In: Ulgiati, S., Brown, M.T., Giampietro, M., Herendeen, R.A., Mayumi, K. *Advances in Energy Studies. Reconsidering the Importance of Energy*.
36. Krausmann, F. 2003. **Land Use and Socio-economic Metabolism in Pre-industrial Agricultural Systems: Four 19th Century Austrian Villages in Comparison.** Social Ecology Working Papers 72, IFF/Social Ecology, Vienna.
37. Krausmann, F., Schandl, H. and Schulz, N. 2003. **Long-Term Industrial Transformation. A comparative Study on the Development of Social Metabolism and Land Use in Austria and the United Kingdom 1830-2000.** Social Ecology Working Paper 70, IFF/Social Ecology, Vienna.
38. Schulz, N., Krausmann, F., Haberl, H. 2001. **Die Bedeutung der Flächeninanspruchnahme durch Gebäude und Infrastruktur für ökosystemare Prozesse am Beispiel der gesellschaftlichen Aneignung von Nettoprimärproduktion in Österreich 1830-2020.**

- In: Umweltbundesamt (Hrsg.): Versiegelt Österreich? Der Flächenverbrauch als und seine Eignung als Indikator für Umweltbeeinträchtigung, 97-103.
39. Krausmann, F. and Haberl, H. **From Wood and Rye to Paper and Beef. Changes in the Socioeconomic Biomass and Energy Metabolism During 200 Years of Industrial Modernization in Austria.** Paper to the 3rd International Conference of the European Society for Ecological Economics, Vienna 3-6 May 2000. Proceedings CD-ROM .
 40. Haberl H., K.-H. Erb, F. Krausmann, W. Loibl, N. Schulz, and H. Weisz. 1999. **Colonizing Landscapes: Human Appropriation of Net Primary Production and Its Influence on Standing Crop and Biomass Turnover in Austria.** Schriftenreihe Soziale Ökologie, Band 57, IFF: Wien.
 41. Weisz, H., F. Krausmann, K.H. Erb, N. Schulz, H. Haberl 1999: **Gesellschaftliche Beeinflussung ökosystemarer Energieflüsse und Energiebestände (NPP-Aneignung).** In: Haberl, H., W. Bittermann, W. Hüttler, M. Fischer-Kowalski, H. Schandl, V. Winiwarter: Indicators for Sustainable Land Use. Synthesebericht zum Kultrulandschaftsforschungsmodul IN4. Wien
 42. Krausmann F. 1998: **Von der Erhaltung der Bodenfruchtbarkeit zur Steigerung der Erträge.** In: Winiwarter, V.: Bodenfruchtbarkeit und Schädlinge im Kontext von Agrargesellschaften. *Schriftenreihe Soziale Ökologie, Band 51, S.5-26.* Wien.
 43. Krausmann, F. 1995: **Biomass as industrial raw material in Austria.** In: Chartier, Ph., Beenackers, A.A.C.M, Grassi, G.: Biomass for Energy, Environment, Agriculture and Industry. 2179-2186. Elsevier Science Oxford, New York.
 44. Krausmann, F. 1994: **Erneuerbare Rohstoffe in Österreich - Chancen und Risiken.** *Soziale Technik 4, 4-6.*
 45. Krausmann, F. 1994: **Erneuerbare Rohstoffe in Österreich - Chancen und Risiken.** Studie der Österreichischen Umweltberatung, Wien.

PRESENTATIONS at SCIENTIFIC CONFERENCES

1. **Socio-economic metabolism: Changing patterns of resource use during industrialization.** Symposium: 20 year anniversary of the Faculty of Environmental and Rural Studies, Javeriana University, Bogota, 25 October 2017 (invited lecture)
2. **Sustainable Farm Systems: Long-Term Socio-Ecological Metabolism in Western Agriculture.** Austrian-Canadian Science and Innovation Days: Success Stories, Vienna, 20 September 2017 (invited lecture; with Geoff Cunfer).
3. **Nahrungsregime und Umwelt in der Globalisierung (1870–2010).** Ringvorlesung Rohstoffe und Entwicklung, Universität Wien, 30 May 2017 (invited lecture)
4. **A multi-scale approach to agroecosystem energy transitions: the case of Austria, 1830-2010.** Conference of the European Society of Ecological Economics, 20.-23. June 2017, Budapest. (S. Gingrich, F. Krausmann).
5. **Has there been an energy trap in the Green Revolution? Insights from a long term perspective across the world.** Conference of the European Society of Ecological Economics, 20.-23. June 2017, Budapest. (Cattaneo, C., Tello, E., Padrò, R., Marco, I., Caravaca, J., Diez, L., Fullana, N., Parcerissas, L., Gingrich, S., Krausmann, F., Soto, D., Gonzalez de Molina, M., Guzman, G., Infante, J., Aguilera, E., Picado, W., Frankova, E., Watson, A., Cunfer, G., McFaiden, J.).
6. **A Central European Trajectory of Land-Use Intensification: the Case of Austria.** Conference of the European Society for Environmental History, Zagreb, 28.6.-2.7.2017. (S. Gingrich, D. Güldner, F. Krausmann)
7. **Comparative Energy—Landscape Integrated Analysis (ELIA) in Past and Present Agroecosystems of Europe and America.** Conference of the European Society for Environmental History, Zagreb, 28.6.-2.7.2017. (E. Domene, J. Marull, C. Cattaneo, C. Font, R. Padró, E. Tello, F. Krausmann, S. Gingrich)
8. **Well-being and sustainability in the Twentieth Century 1910-1970.** International Workshop: Well-Being and Sustainability in the Netherlands, 1850-2050. March 3th and 4th 2017, University of Eindhoven, NL. (invited lecture)

9. **Metabolic transitions.** International Seminar "Économie, société, matérialité(s)", Centre Alexandre Koyre, École des Hautes Études en Sciences Sociales, Paris, 07 December 2016 (invited lecture).
10. **Towards A Circular Economy? Understanding economy-wide global dynamics of material use and in-use stocks of buildings and infrastructure, 1900-2010.** Gordon Research Conference on Industrial Ecology, 19-25 Juni 2016. (Dominik Wiedenhofer, Fridolin Krausmann, Christian Lauk, Tomer Fishman, Alessio Miatto, Hiroki Tanikawa).
11. **Towards a Circular Economy? Understanding global dynamics of in-use material stocks and flows in buildings and infrastructure, from 1900 -2010.** Joint conference of the International Society for Industrial Ecology (ISIE) 12th Socio-Economic Metabolism section conference and 5th Asia-Pacific conference at Nagoya University, Nagoya, Japan. 28-30 September 2016 (Dominik Wiedenhofer, Lauk, C., Fishman, T., Tanikawa, H., Krausmann, F.)
12. **Ressourcen in globalen Nahrungsregimes.** Forschungswerkstatt Nahrungsregime (Ein Workshop des Forschungsschwerpunktes „Wirtschaft und Gesellschaft aus historisch - kulturwissenschaftlicher Perspektive“ der Universität Wien und des Instituts für Geschichte des ländlichen Raumes, St. Pölten, Universität Wien, 15.4.2016. (F. Krausmann and E. Langthaler).
13. **The global economy's circularity. Current state and future options.** International workshop "Material stocks and quality of life", Ministry of the Environment, Tokyo, 08 March 2016 (invited lecture).
14. **The global metabolic transition: Modelling stock- flows dynamics in the 20th century.** International Workshop of Material Stock Analysis and Sustainable Material Use, PreWorkshop of ISIE SEM-AP 2016, Nagoya University, 9th of March 2016 (invited lecture).
15. **The global metabolic transition: Modelling stock- flows dynamics in the 20th century.** Material Stock Analysis and Sustainable Material Use, Academic meeting about Material Stock Analysis. Tokyo, 7th of March 2016 (invited lecture).
16. **Global providers and consumers of metals – an analysis of trade patterns.** Conference of the European Society for Ecological Economics, University of Leeds, 30 June to 3 July 2015. (Anke Schaffartzik, Andreas Mayer, Nina Eisenmenger, Fridolin Krausmann)
17. **Global material use scenarios in the context of resource efficiency programs and targets,** Conference of the European Society for Ecological Economics, University of Leeds, 30 June to 3 July 2015. (Anke Schaffartzik, Nina Eisenmenger, MarinaFischer-Kowalski, Willi Haas, Fridolin Krausmann, Andreas Mayer, Dominik Wiedenhofer)
18. **Global Resource Use in 2050: Insights from Material Flow Analysis,** 8th Biennial Conference of the International Society for Industrial Ecology, University of Surrey (UK), 7.-10. July 2015 (Haas, W., Schaffartzik, A., Fischer-Kowalski, M., Eisenmenger, N., Krausmann, F.)
19. **The global metabolic transition: Resource use and economic development during industrialization,** World Economic History Congress, Kyoto 2015 August 3-7
20. **The global metabolic transition. Patterns and trends in global material use.** University of Zaragoza. Economic History Research Seminar, 28.04.2014 (invited)
21. **The role of global in-use material stocks in the course of the socio-metabolic transition, from 1900 -2009.** European Geophysical Union (EGU), 28.04.-02.5.2014 Vienna. (w. D. Wiedenhofer, H. Tanikawa, T. Fishman).
22. **Sociometabolic transitions defining the Anthropocene.** European Geophysical Union (EGU), 28.04.-02.5.2014 Vienna. (w. M. Fischer-Kowalski and I. Pallua)
23. **Energy in 19th Century Austrian Agriculture: A Socio-ecological Perspective on Regional Diversity and Change over Time.** 2nd World Congress of Environmental History, 7-14 July 2014, Guimaraes, Portugal (w. S. Gingrich, M. Neundlinger, D. Güldner).
24. **Causal determinants of international ecological distribution.** Conference of the International Society of Ecological Economics, 13-15 August 2014, Iceland (w. Teixidó-Figueras, J., Steinberger, J.K., Haberl, H., Wiedmann, T., Wood, R.)

25. **Global long-term dynamics of material stocks and flows in infrastructure and buildings, from 1900-2010.** Conference of the International Society of Ecological Economics, 13-15 August 2014, Iceland (w. D. Wiedenhofer, C. Lauk, H. Tanikawa, T. Fishman).
26. **Current state of and future options for the global economy's circularity.** Conference of the International Society of Ecological Economics, 13-15 August 2014, Iceland (w. W. Haas; D. Wiedenhofer and M. Heinz).
27. **Human biomass use and HANPP: A global long term analysis of biomass use and NPP related planetary boundaries.** Conference of the International Society of Ecological Economics, 13-15 August 2014, Iceland (w. H. Haber, S. Gingrich and K.H. Erb).
28. **Is there a 1970s syndrome? Analyzing structural breaks in the metabolism of industrial economies.** Conference of the European Society for Ecological Economics, 28-31 June 2013, Lille (w. Fischer-Kowalski, M., Wiedenhofer, D., Rovenskaya, E. Haas. W., Pallua, I.)
29. **The Global Metabolic Transition: Regional Patterns and Trends of Global Material and Energy Use, 1950-2010,** Conference of the European Society for Ecological Economics, 28-31 June 2013, Lille. (w. Schaffartzik A., Mayer, A. Eisenmenger, N., Gierlinger, S., Gingrich, S.)
30. **Development and dematerialization: an analysis of timeseries trends across countries,** Conference of the European Society for Ecological Economics, 28-31 June 2013, Lille. (w. Steinberger, S. Getzner, M., Schandl, H., West, J.)
31. **Trends in land use intensification in 19th century Austria: a socio-metabolic perspective on agriculture prior to industrialization.** GLP Open Science Meeting, Berlin, March 19-21, 2014 (w. S. Gingrich, M. Neundlinger, E. Tello and E. Galan).
32. **Linking changes in European land management regimes to changes in the land system, 1800-2010.** GLP Open Science Meeting, Berlin, March 19-21, 2014 (w. M.R. Jepsen, M. Niedertscheider, S. Gingrich, T. Kastner, K.H. Erb).
33. **The social metabolism in the Anthropocene: modes of subsistence, population size, and human impact on Earth.** The Fate of the Earth: The Environment and Human Well-Being", Michigan University, April 2014 (w. Fischer-Kowalski, M., Krausmann, F., Pallua, I.)
34. **The Concept of Social Metabolism and its Application in Sustainability Science and Environmental History.** III Seminario Internacional de Metabolismo Social, 27-29. January 2014, Puebla, Mexico. (invited)
35. **Food, Feed, Fuel and Fiber: The Changing Role of Biomass in Social Metabolism during industrialization.** Conference of the European Society for Environmental History, Munich 20-24 August 2013 (F. Krausmann & Simone Gingrich).
36. **The Global Metabolic Transition Regional Patterns and Trends of Global Material Use, 1950 – 2010.** Anke Schaffartzik, Andreas Mayer, Nina Eisenmenger, Fridolin Krausmann, Sylvia Gierlinger, Simone Gingrich. World Resource Forum, Davos , 6-9 October 2013
37. **The global metabolic transition: Trends and patterns in global material use.** Spring Meeting 2013 of the Materials Research Society, 01-05 April, San Francisco (invited)
38. **Kreislaufwirtschaft und Klimaschutz - Synergien, Potenziale und Limitierungen.** 14. Österreichischer Klimatag, 13-14. April 2013 (W. Haas)
39. **Modelling socio-metabolic transitions: The historical take-off, the acceleration of fossil fuel use, and the 1970s oil price shock - the first trigger of a future decline?** European Geophysical Union, 7.-12. April 2013, Vienna (with D. Wiedenhofer, E. Rovenskaya, W. Haas, M. Fischer-Kowalski).
40. **The metabolic transition: From the agricultural to the industrial society. An introduction to social metabolism and material flow accounting.** DIANET. International School, University of Trieste (in Gorizia), 18 April 2013 (invited)
41. **Umweltgesamtrechnung – Materialflussrechnung.** Eröffnungsreferat Fachbeirat Umweltstatistik Statistik Austria, Wien, 12.11.2012. (invited)

42. **The global metabolic transition. Long term changes in energy, land and material use.** Invited presentation in the CIRAD lecture series "L'histoire et l'évolution de la notion de développement". CIRED, Montpellier, 22 October 2012. (invited)
43. **Development and dematerialization: An analysis of time-series trends across countries.** International Society for Industrial Ecology: MFA-ConAccount Section Conference 2012, Darmstadt: 26-28 September 2012 (with Steinberger, J.; Getzner, M.; Schandl, H.; West, J.)
44. **Regional Patterns of Global Material Flows 1950 – 2005.** International Society for Industrial Ecology: MFA-ConAccount Section Conference 2012, Darmstadt: 26-28 September 2012 (with Mayer, A.; Eisenmenger, N.; Schaffartzik, A.).
45. **Is there a material stock saturation of nations?** International Society for Industrial Ecology: MFA-ConAccount Section Conference 2012, Darmstadt: 26-28 September 2012 (with Tanikawa, H.; Fishman, T.; Shi, F.; Han, J.; Schandl, H.)
46. **Longterm trends in resource efficiency - hinsight, insight, foresight.** International Society for Industrial Ecology: MFA-ConAccount Section Conference 2012, Darmstadt: 26-28 September 2012 (with Eisenmenger, N.; Schaffartzik, A.; Mayer, A.)
47. **India's biophysical economy, 1961-2008: Sustainability in a national and global context.** Internationals Society for Ecological Economics Conference, Rio de Janeiro, 16-19 June 2012 (together with S.J. Singh).
48. **Planetary Boundaries related to the Human Appropriation of Net Primary Production (HANPP).** Planet under Pressure, New Knowledge towards Solutions, London 26-29 March 2012 (with K-H. Erb, S. Gingrich, H. Haberl, A. Bondeau, V. Gaube).
49. **Form Local to Global ... and back: An Environmental History of the Danube 1500-1900.** "From the Local to the Global: Ethics, Environmentalism, and Environmental History in an Interdependent World", Conference of the American Society for Environmental History (ASEH), Madison, Wisconsin, USA, 28th – 31st March 2012. (w. Schmid M., S. Hohensinner, Ch. Sonnlechner, S. Gierlinger, G. Haidvogel, S. Gingrich, V. Winiwarter).
50. **The transformation of a socio-natural site: urban development and river transport on the Viennese Danube (19th, early 20th century).** Cities and societies in comparative perspective. Europ. Assoc. of Urban History, 11th Int. Conference, Prague, Czech Republic, 29th August – 1st September 2012. (w. Gierlinger S., G. Haidvogel, F.; S. Gingrich)
51. **Landwirtschaft und Industrialisierung. Eine sozialökologische Perspektive auf die Transformation der Landwirtschaft im 19. und 20. Jahrhundert.** Umweltgeschichte des ländlichen Raumes in Wissenschaft, Museum und Schule, Osnabrück 21.-22. June 2012.
52. **Adaptation on an Agricultural Frontier: The Socio-Ecological Metabolism of Great Plains Homesteading, 1870- 1940.** 6th Symposium of the Sociedad Latinoamericana y Caribeña de Historia Ambiental (SOLCHA), June 6-8, 2012, Villa de Leyva, Colombia (w. Geoff Cunfer).
53. **Potentials and limits of recycling in a socio-metabolic context.** World Resource Forum. Davos, 19-21. September 2011 (Haas, Willi, Markus Heinz)
54. **From the Socio-metabolic Toolbox: The case of transport as a constraint.** Socio-Environmental Dynamics over the last 12,000 Years: The Creation of Landscapes II (invited presentation). Christian Albrechts Universität Kiel, 14-18.03.2011 (Fischer-Kowalski, Marina, Krausmann, Fridolin, und Smetschka, Barbara).
55. **The social metabolism of European industrialisation: changes in the relation of energy and land use from the 18th to the 20th century.** Peter Wall Institute Conference: Continuity in Energy Regimes, 27-29. October 2011, Munich.
56. **Vienna's nitrogen metabolism: food, feed, waste and sewage in the early phase of industrialisation (1869-1910).** Nitrogen and global change conference, Edinburgh, Scotland, 11th -14th April 2011. (w. Gierlinger S., S. Gingrich).

57. **The global metabolic transition. Changes in Material Use in Japan, the USA and the UK during the 19th and 20th century.** International workshop of the Energy Growth and Pollution Network, 21. October 2011, Lund.
58. **The global metabolic transition: a comparative perspective on Asia, Europe and North America.** Conference of the European Society for Environmental History, 28 June to 2 July 2011, Turku, Finland (F. Krausmann, S. Gingrich and S. Gierlinger)
59. **The metabolic transition: Changes in material use in Japan and the USA during the last century.** Conference of the European Society for Ecological Economics, 14-17 June 2011, Istanbul (F. Krausmann, S. Gingrich and S. Gierlinger)
60. **Progress in economy wide material flow accounting: How robust are international MFA data?** Asia-Pacific Meeting and MFA-ConAccount Meeting of the International Society for Industrial Ecology, 7-9 November, Tokyo, Japan. (Krausmann, F., Fischer-Kowalski, M., Giljum, S., Lutter, S., Mayer, A.)
61. **Understanding energy and material productivity.** Asia-Pacific Meeting and MFA-ConAccount Meeting of the International Society for Industrial Ecology, 7-9 November, Tokyo, Japan. (Julia K. Steinberger, Fridolin Krausmann)
62. **On the End of Past Organic Agricultural Systems: The First Globalization in European Socio-Ecological Transition (1870-1939).** Esther Boserup Conference 15-17 November 2010, Vienna. (ENRIC TELLO, MANUEL GONZALEZ DE MOLINA, FRIDOLIN KRAUSMANN, GILLES BILLEN, and GEOFF CUNFER).
63. **Driving force or phase-out model? Danube transport and resource supply in the industrialising city of Vienna 1800-1920.** Water History Conference, 16th – 19th June 2010, Delft, The Netherlands. (w. Gingrich S., G. Haidvogel)
64. **Der Franziszeische Kataster als Quelle für sozial-ökologische Langzeitforschung: Rekonstruktion von materiellen und energetischen Austauschbeziehungen in Agrarökosystemen.** Workshop „Der Franziszeische Kataster als Agrarhistorische Quelle“, Landesarchiv St. Pölten, 18. 06. 2010. (F. Krausmann, invited)
65. **What do economic resource productivities measure?** Conference of the International Society for Ecological Economics: Advancing Sustainability in a time of crisis. 22-25 August 2010, Oldenburg/Bremen, Germany. (Julia K. Steinberger, Fridolin P. Krausmann, Marina Fischer-Kowalski, Nina Eisenmenger)
66. **The worlds bioenergy potential in the context of global food and farming trends: A scenario analysis for 2050.** Conference of the International Society for Ecological Economics: Advancing Sustainability in a time of crisis. 22-25 August 2010, Oldenburg/Bremen, Germany. (Karl-Heinz Erb, Helmut Haberl, Fridolin Krausmann, Christian Lauk, Christoph Plutzer, Julia K. Steinberger).
67. **India's future in a global context: What does this mean in a biophysical sense?** Conference of the International Society for Ecological Economics: Advancing Sustainability in a time of crisis. 22-25 August 2010, Oldenburg/Bremen, Germany. (Singh, S.J., Krausmann, F., Gingrich, S.)
68. **Long term changes in the Human Appropriation of Net Primary Production: An analysis of trends and patterns from national.** Open Science Meeting of the Global Land Project: Land Systems, Global Change and Sustainability. Arizona State University, Phoenix, Arizona, October 17-19, 2010. (Fridolin Krausmann, Simone Gingrich, H.Haberl, K-H. Erb, E.Schwarzlmüller, N.Kohlheb, T.Kastner, A.Musel)
69. **An integrated analysis of the interrelation between food, livestock, bioenergy and climate change for the year 2050.** Open Science Meeting of the Global Land Project: Land Systems, Global Change and Sustainability. Arizona State University, Phoenix, Arizona, October 17-19, 2010. (Karlheinz Erb, Helmut Haberl, Fridolin Krausmann, Christian Lauk, Christoph Plutzer, Julia Steinberger).
70. **Urban Metabolism and Sustainable Development.** International Conference City and Environment Programme, Lyon, March 11, 2010 (F. Krausmann, invited)
71. **Soziale Ökologie: Konzepte, Methoden, Forschung.** Tagung Soziale Ökologie im Forschungscluster Hydrosphäre, Karlsruher Institut für Technologie (KIT), 15 April 2010 (Fridolin Krausmann and Andreas Mayer, invited)

72. **Reviewing the world's bioenergy potential in the context of global food and farming trends.** International Workshop Biomass resource assessment for biofuels/bioenergy and competition with other biomass uses. European Environmental Agency. Eberswalde, 8-9 December 2009 (invited).
73. **Am Beginn des Zweiten Solarzeitalters. Über Aufstieg und Niedergang der fossilen Epoche.** Toblacher Gespräche: Mehr Autarkie wagen: Dezentrale Energie als Baustein für nach-fossile Regionalwirtschaften, 2.-3. October 2009, Toblach, Italy (invited).
74. **Future Scenarios for Global Materials Use.** World Resources Forum Davos, Davos, Sept. 15-16 2009 (together with Marina Fischer-Kowalski).
75. **Environmental history of a city and its river: the spatial and the physical dimensions of the Viennese Danube, 1501-1900.** Urban Ecological Imprint Workshop, Paris, September 10-11, 2009 (together with Gingrich S. and Haidvogel G.)
76. **Agroecosystems on the American Frontier: Material and Energy Systems and Sustainability.** World Congress of Environmental History in Copenhagen, August 05-08th, 2009 (together with G. Cunfer).
77. **Energy use and economic development: A comparative analysis of useful work supply in Austria, Japan, the United Kingdom and the USA during 100 years of economic growth.** World Economic History Congress, 03-07th August 2009, Utrecht (together with R. Ayres and others).
78. **The metabolic scale of the world economy in the past century - dynamics drivers impacts.** International Society for Industrial Ecology's 2009 Conference in Lisbon, Portugal June 21-24th, 2009 (together with M. Fischer-Kowalski and N. Eisenmenger).
79. **Global patterns of material use: The impact of economic development population and technology on cross country differences of material consumption.** International Society for Industrial Ecology's 2009 Conference in Lisbon, Portugal June 21-24th, 2009 (together with J. Steinberger and N. Eisenmenger).
80. **Diet, trade and land use. The social Ecology of the food system. Case Study Olive Oil.** International Society for Industrial Ecology's 2009 Conference in Lisbon, Portugal June 21-24th, 2009 (together with A. Scheidl).
81. **Drivers of spatial patterns of the global human appropriation of net primary production (HANPP): Towards a conceptual framework** IHDP Open Meeting, Bonn 2009 (together with Haberl and others).
82. **Implications of global biomass trade on the human appropriation of net primary production.** IHDP Open Meeting, Bonn April 2009 (together with Erb and others),
83. **Resource use and the global economy 1960-2005. A preliminary assessment. UNEP Resource Panel.** Santa Barbara, November 2008 (with Marina Fischer-Kowalski and Nina Eisenmenger):
84. **Globale Biomasseproduktion und deren Nutzung.** Symposium Industrielle Biotechnologie mit nachwachsenden Rohstoffen. 11-12. June 2008, Frankfurt/M.
85. **Biomass consumption, international trade and global patterns of human appropriation of net primary production.** Globalisation and the local landscape. International workshop of the Global Land Project at the University of Copenhagen, November 21-22, 2008.
86. **Energy use and economic development. A comparative analysis of useful work supply in Austria, Japan, the United Kingdom and the USA during 100 years of economic growth.** Monte Verita Conference on Sustainable Resource Use and Economic dynamics (SURED) 2008, Ascona (CH) June 2-5, 2008. (with Robert Ayres, Nina Eisenmenger and Ben Warr).
87. **Mining or Maintaining Soil Fertility? Agricultural Practice in the Old and New World.** Annual meeting of the American Society for Environmental History, 12-15 March 2008, Boise ID (together with Geoff Cunfer).
88. **The River and the City. Urban metabolism and its role for the social-ecology of a watershed.** European Science Foundation Exploratory Workshop: Towards an

Environmental History of the Danube's Riverine Landscapes (Envirdanube), 27-28 February 2008, Vienna.

89. **The Industrial Revolution, material and energy flows and the transformation of agriculture.** Kerner von Marilaum Workshop der österr. Akademie der Wissenschaften "The challenge of sustaining soils", 08-09 November 2007, Vienna.
90. **Nutzvieh zwischen Multifunktionalität und Produktionsmaschine. Historische Entwicklung und globale Muster.** Tier und Menschen als Motoren der Industrialisierung. Landesmuseum für Arbeit und Technik, 28-29. September 2007, Mannheim.
91. **The challenge of China's transition from an agrarian socio-ecological regime to an industrial "circular economy".** 2007 Beijing International Conference on Environmental Sociology, Renmin University, Beijing, July 2007. (together with Marina Fischer-Kowalski).
92. **Analyzing impacts of the global socio-economic biomass metabolism on terrestrial ecosystems.** International Conference of the Society for Industrial Ecology, 17-20 June 2007, Toronto. (together with Karl-Heinz Erb, Helmut Haberl, Veronika Gaube, and Simone Gingrich)
93. **Austria's Carbon Metabolism 1830-2000: Implications of the agrarian-industrial transition.** International Conference of the Society for Industrial Ecology, 17-20 June 2007, Toronto. (together with Karl-Heinz Erb, Helmut Haberl, Veronika Gaube, and Simone Gingrich)
94. **Transition to a sustainable social metabolism. Facing the global challenge.** Plenary lecture at the International Conference of the Society for Industrial Ecology, 17-20 June 2007, Toronto. (together with Marina Fischer-Kowalski).
95. **The global metabolic transition. Empirical evidence of an ongoing process.** International Conference of the Society for Industrial Ecology, 17-20 June 2007, Toronto. (Together with Simone Gingrich, and K. Heinz Erb).
96. **Early birds and latecomers: Foreign trade, industrialization and the environment in the United Kingdom and the Austro-Hungarian Empire 1800-1915.** Fourth Conference of the European Society for Environmental History, Amsterdam, June 5-9, 2007 (together with Simone Gingrich).
97. **Historical Sustainability Research: Out of the frying pan into the fire: Industrialization as a socio-ecological transition process.** Conference of the international society for ecological economics, 15-18 December 2006, New Delhi, India
98. **A City and its Hinterland: The Societal Metabolism of Vienna 1800-2000.** 4th Int. Roundtable on Urban Environmental History, 16-18 November 2006, Paris.
99. **Global human appropriation of net primary production. Spatial patterns, trends during the 20th century, and implications for biodiversity.** Earth System Science Partnership conference "Global Environmental Change: Regional Challenges". 9-12 November 2006, Beijing, China. (together with H. Haberl, K.H. Erb, A. Bondeau, C. Plutzer, S. Gingrich, V. Gaube).
100. **The global metabolic transition. Growth vs. decoupling.** Conaccount-Conference: Dematerialization across scales: Measurement, empirical evidence, future options. September 13-14, 2006, Vienna, Austria (together with Gingrich, S. Erb, K.H., Haberl, H.)
101. **The MEFASPACE-hist model. Material flows and transport in agrarian societies.** Gordon Research Conference on Industrial Ecology. August 2006, Oxford, UK (together with M. Fischer-Kowalski and G. Rainer).
102. **The forest transition in Central Europe. A socio-ecological perspective.** 3rd IGU-LUCC Workshop, Praha, 20-22 April 2006 (together with Simone Gingrich).
103. **The Social Metabolism of European Industrialization: Energy and Land in the United Kingdom and Austria.** III Simposio Latinoamericano y Caribeno de Historia Ambiental, April 6th to 8th 2006, Carmona (Spain).
104. **The forest transition in Central Europe: A socio-ecological perspective.** The 6th Open Meeting of the Human Dimensions of Global Environmental Change Research Community, Bonn, 10-13 October 2005. (Together with Karl-Heinz Erb)

105. **Global Human Appropriation of the Products of Photosynthesis in 2000.** The 6th Open Meeting of the Human Dimensions of Global Environmental Change Research Community, Bonn, 10-13 October 2005. Together with Karlheinz Erb, Helmut Haberl, Veronika Gaube, Christoph Plutzer, Simone Gingrich, Alberte Bondeau, Wolfgang Lucht
106. **Transitions in the North, Transitions in the South. Towards identifying and comparing transitions of coupled socio-ecological systems.** The 6th Open Meeting of the Human Dimensions of Global Environmental Change Research Community, Bonn, 10-13 October 2005. (Together with Marina Fischer-Kowalski and Heinz Schandl)
107. **Social metabolism and land resources. concepts, methods, applications.** Environmental Accounting, 25 to 26 September 2005, Prague. (Together with Karl-Heinz Erb)
108. **Global Patterns in Socio-Economic Biomass Metabolism. A New Estimate.** Conference of the International Society for Industrial Ecology 2005: Industrial Ecology for a Sustainable Future 2005, Stockholm, June 12-15, 2005. (Together with Karl-Heinz Erb and Helmut Haberl).
109. **Land use change and social metabolism. Research activities and approaches at the Institute of Social Ecology.** 2nd IGU LUCS Workshop, Mikulov, 05-07 March 2005.
110. **Gesellschaftlicher Metabolismus, Landnutzung und räumliche Muster im Vergleich.** Sozialökologische Interaktionsmodelle und Systemtheorien. Ansätze einer theoretischen Begründung integrativer Projekte in der Geographie? Tagung am Institut für Geographie und Regionalforschung der Universität Wien, 8. bis 9. Juli 2005.
111. **Ein sozial-ökologischer Blick auf die Industrialisierung: Das Vereinigte Königreich und Österreich 1830 bis 2000.** Herausgebertreffen der GAIA, 29. bis 30. April, Wien
From LTER to LTSER: The socioeconomic dimension of long-term socio-ecological research. European-American Workshop on Long term socio-environmental research, Motz (F.) 1-5 July 2003. (together with C. Amann and H. Haberl).
113. **A city and its hinterland: The social metabolism of Vienna 1800-2000.** 3rd Conference of the European Society of Environmental History: History and Sustainability, 16-19 February 2005, Florence.
114. **Energy in early and late industrialization in Austria and the UK.** Colloquium on Energy, Economic Growth and Population. 02-04 October 2004. Napoli, Italy (together with H. Schandl)
115. **Historical patterns of biomass flows: The development of biomass harvest and trade in relation to land use and transport in Austria 1920-2000.** ConAccount Meeting. A future research agenda for MFA – Towards a new common ground for Research on Sustainable Resource use. 10-12 October 2004, Zürich.
116. **The Transformation from a Land Based to a Fossil Fuel Based Energy System. The Case of Austria 1800-2000.** Gordon Research Conference on Industrial Ecology. 01-06 August 2004, Oxford, UK.
117. **Landnutzung und gesellschaftlicher Metabolismus in dörflichen Agrarsystemen. Eine sozial-ökologische Perspektive zur Agrarmodernisierung in Österreich.** Umweltgeschichte der Landwirtschaft im 19. und 20. Jahrhundert Sommertagung des Arbeitskreises für Agrargeschichte, 25. Juni 2004
118. **Monitoring the Physical Economy: Material Flow Trends and Patterns of European Union Countries.** Ecological Engineering for Homeostatic Human Activities. International Workshop on Sustainable Social Systems. 27 February 2004, Toyohashi University, Japan
119. **Land-use change and socio-economic metabolism: an approach to analyze coupled human-environment systems.** LAND Open Science Conference: Integrated Research on Coupled Human Environmental Systems. Morelia, Mexico, 1-5 December 2003 (together with H. Haberl)
120. **Land Use and Societal Metabolism in 19th Century Austrian Villages.** 2nd Conference of the European Society of Environmental History: Dealing with Diversity, 03-07 September 2003, Prague
121. **Long term changes in land use patterns, socio-economic driving forces and environmental change. A central European case study.** Conference of the International Geographical Union: Global and Regional Land Use/Cover Changes. 17 – 20 July 2003, Moscow, Russia (together with H. Haberl).

122. **European Material Matters. Trends and Patterns in Material Flows in the European Union Countries 1970-2000.** Second Conference of the International Society for Industrial Ecology. 29 June to 03 July 2003, Ann Arbor, Michigan. (together with H. Weisz, C. Amann, N. Eisenmenger, K. Hubacek)
123. **The Transformation of European Land Use Systems During Industrial Modernization. A biophysical analysis of the development in Austrian villages since 1830.** Environmental History Conference: The Regional Tendencies of the Interaction of Human Being and Nature in the Process of the Transition from the Agrarian Society, 19 – 21 March 2003, Tver, Russia.
124. **Accounting for the Socio-Economic Energy System. A comparative analysis of the development of socio-economic energy flows in the UK and Austria since the early 19th century.** The 29TH Symposium of the International Committee for the History of Technology. Granada, Spain, 24-29 June 2002 (together with N.B. Schulz).
125. **Vergleichende Untersuchungen zur langfristigen Entwicklung von gesellschaftlichem Metabolismus und Landnutzung in Österreich und VK.** Der Europäische Sonderweg: Die sozialmetabolische Transformation vom Agrarsystem zur Industrialisierung. 25-26 April 2002, Dietramszell (together with H. Schandl and N.B. Schulz).
127. **Land-use change and socio-economic metabolism: A Research approach.** Landscape Tomorrow: Sustainable Development of Multifunctional Landscapes. 19-20 April 2002. Center for Agricultural Landscape and Land Use Research (ZALF), Müncheberg, Deutschland.
128. **Socio-economic development and environmental change in the United Kingdom and Austria from 1830 until present.** Conference of the American Society of Environmental History: Producing and Consuming Natures. 20-25 March 2002, Denver, Colorado (together with H. Schandl and N.B. Schulz).
129. **The Franziscan Cadastre as a source to analyze pre-industrial agro-ecosystems.** 2nd Central European LUCC Workshop: Towards common LUCC research based on Franciscean Cadastre cartographic and written data. 13-15 February 2002, Charles University Prague.
130. **Biomasse und Energie in Österreich 1830 bis 1995.** Der Europäische Sonderweg: Die sozialmetabolische Transformation vom Agrarsystem zur Industrialisierung. 24-26 November 2000, Dietramszell.
131. **Land Use and Socioeconomic Metabolism. The Case of Austria 1830-1995.** IGU-LUCC Prague 2001: Conference of the International Geographical Union, Study Group on Land Use and Land Cover Change: Land Use/Land Cover Change in the Period of Globalization, 14-19 July 2001, Prague.
132. **Land Use and the Socio-Economic Energy System. 200 Years of Industrial Modernization in Austria.** ESEH St. Andrews 2001: First International Conference of the European Society for Environmental History. Environmental History: problems and potential. 5-8 September 2001, St. Andrews.
133. **Pressure Indicators for Biodiversity Loss.** Paper to the Conference „Predicting Biodiversity in European Landscapes: Mapping, Patterns, Indicators, Monitoring,“ Vienna 18-20 November 2001. (together with Niels B. Schulz, Helmut Haberl, Christoph Plutzer, Karl-Heinz Erb)
134. **Human Impacts on Ecosystem Functioning and Species Diversity in Cultural Landscapes: Empirical Analyses for an Austrian Transect.** Global Change Open Science Conference. Amsterdam, The Netherlands, 10-14.July 2001. (together with H. Haberl, N.B. Schulz, C. Plutzer, K.-H. Erb, W. Loibl, N. Sauberer, H. Weisz)
135. **Land-Use Change and Socioeconomic Metabolism: The Case of Austria 1950-2020.** Global Change Open Science Conference. Amsterdam, The Netherlands, 10-14.July 2001. (together with K.-H. Erb, H. Adensam, H. Haberl und N.B. Schulz)
136. **Landscape Change as a consequence of Changing Social Metabolism. The Case of Austria 1830 to 2000.** ASEH Durham 2001: Conference of the American Society of Environmental History: Making Environmental History relevant in the 21st Century. 28 March to 1 April 2001 in Durham NC. (together with H. Haberl).

137. **Die Bedeutung der Flächeninanspruchnahme durch Gebäude und Infrastruktur für ökosystemare Prozesse am Beispiel der gesellschaftlichen Aneignung von Nettoprimärproduktion, Österreich 1830-2020.** UBA Tagung: Versiegelt Österreich? Der Flächenverbrauch und seine Eignung als Indikator für Umweltbeeinträchtigungen. Meeting at the Umweltbundesamt in Vienna, 15 March 2001 (together with Niels Schulz und Helmut Haberl).
138. **From Wood and Rye to Paper and Beef. Changes in the socio-economic biomass metabolism during 200 years of industrial modernization in Austria, 1830-1995.** ESEE Vienna 2000: 3rd international conference of the European Society of Ecological Economics: Transitions Towards a Sustainable Europe. 3-6 Mai 2000 in Vienna. (together with H. Haberl).
139. **Colonizing Landscapes: Land-Use Induced Changes in Ecological Energy Flows and Consequences for Biomass and Carbon Storage in the Aboveground Vegetation – The Case of Austria.** IHDP Kanagawa 1999 : 1999 Open Meeting of the Human Dimensions of Global Environmental Change Research Community, Session: Land Use and Cover Change, 1999, Kanagawa, Japan. (together with Helmut Haberl, Karl-Heinz Erb).
140. **Terrestrial Ecosystems and Industrial Transformation: Long Term Dynamics of Social Biomass-Metabolism, Land-Use and Human Appropriation of Net Primary Production in Austria 1830 - 1995.** Conference 1999. Nature, Society and History. Long Term Dynamics of Social Metabolism. 30 September to 2 October 1999, Vienna.
141. **Colonizing Landscapes: A theoretical concept and an empirical case study to analyze the dynamics of land use change.** GCTE-LUCC Open Science Conference. Earth's changing Land. 14-18 March 1998, Barcelona. (together with H. Weisz).