

# Nina Eisenmenger • Curriculum Vitae

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## Contact

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## Personal Dates

Date of birth: March 3, 1972  
Place of birth: Vienna, Austria  
Nationality: Austrian  
Academic degrees: Mag. rer. nat., Dr. phil.  
Children: Nicolas, born April 6, 2009

## Languages

German: first language  
English: good knowledge  
Latin, French: basic knowledge

## Academic Qualification and Education

April 2008 Doctor phil. in "Social Ecology" at the Alpen-Adria-Universitaet  
Sept. 2001 Magistra rer.nat. in "Human Ecology and Environmental Economics" at the University of Vienna (Individual Diploma with courses at the University of Vienna, Vienna University of Economics and Business Administration, and the University of Natural Resources and Applied Life Sciences)  
1997 – 1998 Erasmus sojourn and participation at the Master Program "Human Ecology", Vrije Universiteit Brussel / Free University of Brussels, Belgium.  
1990 – 1992 Graduate Studies in "Mechanical Engineering" at the Vienna University of Technology

## Honors / Awards

2009 Dissertationspreis der Privatstiftung Kärntner Sparkasse

## Professional Positions

2012 ongoing Assistant Professor, tenure track position (50%) at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet Klagenfurt Wien Graz  
2010 – 2012 Postdoc Assistant, tenure track position (50%) at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet Klagenfurt Wien Graz

2009 – 2010	Parental leave
2004 – 2010	Senior researcher and lecturer at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet Klagenfurt Wien Graz
2001 – 2004	Researcher and lecturer at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet Klagenfurt Wien Graz
1999 – 2001	Assistant to the Managing Director at Climate Alliance Austria. Climate Alliance between Austrian Cities with Indigenous Rainforest Peoples supports the implementation of climate protection at the local level.

## Further Activities

**Coordination of the research area “social metabolism”** at the Inst. for Social Ecology (2010 ongoing).  
Co-coordination of the research area “social metabolism” at the Inst. for Social Ecology (2005-2010).

**Coordination of academic teaching** at the Institute of Social Ecology, and development of the Master study program “Social and Human Ecology”. (2002-2005)

**Member and coordination of the “Institutskonferenz”** at the Institute of Social Ecology. (2007-2009)

**Participation in Committees:** Faculty Search Committee for the Professor of Sustainable Resource Use at the Institute of Social Ecology (2008), Habilitation Committee of Dr. Kurt Kratena at the Institute of Social Ecology (2008), Thesis Committee of Ana Citlalic Gonzalez Martinez at the UAB (2008)

**Reviewer** for: Journal of Industrial Ecology; Resources, Conservation & Recycling; Journal of European Environmental Policy; International Journal of Global Environmental Issues; Journal of Cleaner Production; Environment, Science & Technology.

**Consultancy** for EUROSTAT, Statistics Austria, the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, and the OECD concerning material flow analysis, sustainable use of resources, and resource productivity.

In particular:

Consultancy for **Eurostat** as participant in the Eurostat Task Force on Material Flow Accounts (March 2008, Nov. 2007, Dec. 2006, Jan. 2006, Nov. 2014), the Eurostat Task Force on Environmental Impacts (Nov. 2007), the Eurostat MFA training for European Statistical Offices (2007, 2013), and the Eurostat/EFTA Working Group “Environmental Accounts” (May 2007).

Participation at international meetings as **delegate from the Austrian Ministry of Agriculture, Forestry, Environment and Water Management** at the UNEP “International Workshop Resource Efficiency and the Environment: Identifying Key Resource Flows” (Tokyo/Japan, Sept. 2007); the OECD Meeting of the Working Group on Environmental Information and Outlooks (WGEIO) (Vienna/Austria, Sept. 2006); the OECD Japan Seminar “Material Flows and Resource Productivity. From Knowledge to Practical Policies” (Tokyo/Japan, Sept. 2007); the OECD Meeting of the Working Group on Environmental Information and Outlooks (WGEIO) “OECD workshop on material flows and related indicators” (Helsinki/Finland, June 2004).

Consultancy for the **OECD** in establishing Material Flow Accounts for the OECD countries (2006).

Participation in the **UNEP** International Resource Panel in April 2013.

## Membership in professional bodies

2010 ongoing	Treasurer of the European Society of Ecological Economics (ESEE)
2009 ongoing	Member of the ESEE Board
2006 ongoing	Member of the International Society of Industrial Ecology (ISIE)
2005 ongoing	Member of the European Society of Ecological Economics (ESEE)

## Research Sojourns

- July 2008                      Research Affiliate at the Yale University, Center for Industrial Ecology, USA.  
Contact: Prof. Thomas Graedel
- Sept. 2002                     Research stay at the UAB Universitat Autònoma de Barcelona, Spain.  
Contact: Prof. Joan Martinez-Alier

## Projects

- since 2001                    Coordination of 21, co-coordination of 9, and cooperation in a total of 55 national and international research projects.

### ***Projects (past 5 years selection)***

- 2012 – 2016                 “DESIRE – DEvelopment of a System of Indicators for a Resource efficient Europe”. Collaborative Project in the FP7. Project Coordination at the Institute of Social Ecology.
- 2014 – 2015                 “An empirical assessment comparing input-output-based and hybrid methodologies to calculate demand-based measures of material flows”. Project funded by the OECD in cooperation with WU Vienna (project coordination) and CSIRO Australia. Project coordination at the Institute of Social Ecology.
- 2014 – 2015                 “Ressourcenbericht 2014 – Neuauflage des Berichts 2011 “Ressourcennutzung in Österreich””. Project funded by the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management and the Austrian Federal Ministry of Science, Research and Economy.
- 2012 – 2014                 “Assessment of Scenarios and Options towards a Resource Efficient Europe”. Tender ENV/F.1/ETU/2011/0044 of the DG Environment. Project Coordination at the Institute of Social Ecology.
- 2010 – 2016                 Environmental Accounts: Activity 2: Economy-wide Material Flow Accounts, participation as subcontractor of Sogeti. Project Coordination at the Institute of Social Ecology.
- 2007 – 2016                 “Raw Material Equivalents for the Austrian Imports and Exports”. 7 Projects, yearly funding by the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management. Project coordination (2010-2014) and co-coordination (2007-2010).
- 2007 – 2016                 “UNEP Resource Panel. Sustainable Resource Management” 6 Projects supporting activities in the UNEP Panel for Sustainable Resource Use. Projects funded by the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management. Co-coordination (2007-2015) and coordination (2015/2016).
- 2010 – 2011                 “Assessment of resource efficiency indicators and targets” (SR2010). Project under the Framework contract “Towards Sustainable Management of Resources: Framework contract to support Policy Development” ENV.G.4/FRA/2008/0112. Market contract with DG environment. Project coordination.
- 2010 – 2011                 “Large Scale Planning and Design of Resource Use” (SR13) Project under the Framework contract “Towards Sustainable Management of Resources: Framework contract to support Policy Development” ENV.G.4/FRA/2008/0112. Market contract with DG environment. Co-coordination.
- 2010 – 2011                 “Ressourcendaten”. Project funded by the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management. Project coordination.
- 2010 – 2011                 “Environmental accounts: statistical services for data collection, processing and dissemination of physical modules”. Market contract with DG environment and EUROSTAT. Tender 2009/S 126-182782, Lot 2.
- 2009 – 2010                 “Preparatory Study for the Review of the Thematic Strategy on the Sustainable Use of Natural Resources” (SR4). Project under the Framework contract “Towards

2008 – 2010 Sustainable Management of Resources: Framework contract to support Policy Development” ENV.G.4/FRA/2008/0112. Market contract with DG environment.  
 “GLOMETRA - The global metabolic transition: Long term trends and patterns of socioeconomic material and energy use”. Project funded by the Austrian Science Fund FWF.

## Academic Teaching

since 2013 “Seminar for Master and PhD Candidates” at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet.

since 2011 Seminar on “climate and resource policy” at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet.

since 2008 lectures on “environmental accounting and material flow analysis” within the course “methods of human ecology” at the University of Vienna

since 2008 lectures on “world system theory” and “ecological economics” within the course “social science foundations of Social Ecology” at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet.

since 2003 Seminar on “Methods of Social Ecology – Material- and Energy Flow Accounting and Sustainable Development – practical application” at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet.

2011 and 2012 Seminar on “social-ecological aspects of the global division of labour” at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet.

2007 Seminar on “Ecological Economics” at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet.

2006 Seminar on “Exchange of natural resources and time in a globalizing world system” at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet.

2006 Seminar on “Social Metabolism and Analysis of Energetic Consumption” at the COREP Institute, Turin, Italy.

2003, 2004 “Ring-Vorlesung Soziale Ökologie” at the Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet.

Master Thesis: Since 2010 supervision of 9 Master Thesis, 1 of those at the University of Vienna; co-supervision of 2 Master Thesis at the University of Vienna.  
 Since 2010 first examiner in 4 and second examiner in 11 Master exams. Chair of 2 Master exams.

## National and International Presentations

since 2001 12 invited talks, 18 competitive talks (as first author), 4 posters  
 in total 44 presentations

### ***Presentations (selection out of the past 5 years)***

July 3, 2015 Presentation “How is Austrian Raw Material Consumption developing over time? a methods comparison extended” at the ESEE2015 conference “Transformations”, 11th International Conference of the European Society for Ecological Economics in Leeds, UK. June 30 – July 3, 2015. Authors: Nina Eisenmenger, Anke Schaffartzik, Dominik Wiedenhofer

July 1, 2015 Presentation “Future resource use – where are we heading? global material use scenarios in the context of resource efficiency programs and targets” at the ESEE2015 conference “Transformations”, 11th International Conference of the European Society for Ecological Economics in Leeds, UK. June 30 – July 3, 2015. Authors: Anke Schaffartzik, Nina Eisenmenger, Marina Fischer-Kowalski, Willi Haas,

- Fridolin Krausmann, Andreas Mayer, Dominik Wiedenhofer. Presented by Nina Eisenmenger.
- Aug. 2014 Presentation “An Indicator Framework for a Comprehensive Evaluation of Resource Efficiency. FP7 project DESIRE” at the ISEE conference 2014 in Reykjavik, Iceland. Aug. 13-15, 2014. Authors: Nina Eisenmenger, Michaela Theurl, Stefan Giljum, Stephan Lutter, Henrique Pereira, Alexandra Marques, Arnold Tukker.
- June 2014 Presentation “DESIRE The indicator framework and input-output analysis” at the Green Week 2014 in Brussels, Belgium. June 3-5, 2014. Authors: Nina Eisenmenger, Michaela Theurl, Sylvia Gierlinger, Stefan Giljum, Stephan Lutter, Sebastiaan Deetmans, Rene Kleijn.
- Oct. 2013 Presentation “How many materials does Austria globally use? A comparison of six methods to calculate Raw Material Equivalents (RME)” at the World Resources Forum 2013 in Davos, Switzerland. October 6-9, 2013. Authors: Nina Eisenmenger, Anke Schaffartzik, Dominik Wiedenhofer
- Oct. 2013 Presentation “The Global Metabolic Transition. Regional Patterns and Trends of Global Material Use, 1950-2010” at the World Resources Forum 2013 in Davos, Switzerland. October 6-9, 2013. Authors: Anke Schaffartzik, Andreas Mayer, Nina Eisenmenger, Fridolin Krausmann, Sylvia Gierlinger, Simone Gingrich.
- June 2013 Presentation “How many materials does Austria globally use? A comparison of six methods to calculate Raw Material Equivalents (RME)” at the ESEE Conference 2013 “Ecological Economics and Institutional Dynamics”. Lille, France. June 18-21, 2013. Authors: Nina Eisenmenger, Anke Schaffartzik, Dominik Wiedenhofer
- Sept. 2012 Presentation “longterm trends in resource efficiency” at the MFA-ConAccount Section Conference 2012 “Socio-economic metabolism”. Darmstadt, Germany. Sept. 26.-28., 2012. Authors: Nina Eisenmenger, Fridolin Krausmann, Anke Schaffartzik, Andreas Mayer, Dominik Wiedenhofer.
- Sept. 2012 Presentation “Raw Material Equivalents (RME) of Austrian Trade Flows” at the EEA-Eurostat technical expert workshop on methods and approaches to estimate material resource use embodied in imports and exports. Copenhagen, Denmark. April 26-27, 2012. Authors: Nina Eisenmenger
- April 2012 Presentation “Ressourceneffizienz. Auswirkungen auf den Bedarf mineralischer Rohstoffe” auf der Informationsveranstaltung des Forum Rohstoffe. Saalfelden, Austria. April. 24.-25., 2012. Authors: Nina Eisenmenger
- Dec. 2011 Presentation “GDP and beyond. Sustainable resource use – challenges and needs” at the Round Table “Environmental Economics” organised by the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management. Vienna, Austria. Dec. 11, 2011. Authors: Nina Eisenmenger
- June 2011 Presentation “The Role of Trade in Domestic Resource Use and Resource Efficiency. Raw Material Equivalents of Austrian Trade” at the ESEE 2011 Conference “Advancing Ecological Economics. Theory and Practice.”. Istanbul, Turkey. June 14-17, 2011. Authors: Nina Eisenmenger, Anke Schaffartzik, Fridolin Krausmann.
- June 2011 Presentation “resource efficiency? material flow analysis on the edge between accounting practice and political implementation” at the ISIE 2011 Conference “Science, Systems, and Sustainability”. Berkeley, California. June 7-10, 2011. Authors: Anke Schaffartzik, Nina Eisenmenger, Fridolin Krausmann, Marina Fischer-Kowalski.
- Nov. 2010 Presentation „Projekt Ressourcendaten“ at the “Ressourceneffizienz Aktionsplan” (REAP) Resonanzgruppe at the BMLFUW und BMWFJ. Vienna, Austria. November 11, 2010. Author: Nina Eisenmenger, Anke Schaffartzik.
- June 2010 Presentation „Ohne Mass und Ziel?! Unser Umgang mit den natürlichen Ressourcen“ at the Robert-Jungk-Bibliothek für Zukunftsfragen. Salzburg, Austria. June 16, 2010. Author: Nina Eisenmenger

Jan. 2010 Presentation "Resource Use and Economic Growth. Strongly Linked, Mutually Dependent, or Decoupling?" at the Conference "Growth in Transition". Vienna, Austria. January 28-29, 2010. Author: Nina Eisenmenger

## Publications (selection)

### *Articles and Book Chapters*

Dorning, C., Eisenmenger, N. submitted 2014. South America's biophysical involvement in international trade: the physical trade balances of Argentina, Bolivia and Brazil in the light of ecologically unequal exchange. *Journal of Political Ecology*.

Eisenmenger, N. 2015. Method-Box: Material Flow Accounting. In: Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (Eds.) *Social Ecology. Society-Nature Relations Across Time And Space*. Springer, forthcoming.

Krausmann, F., Weisz, H., Eisenmenger, N. 2015. Metabolic regimes and global metabolic transition: a historical overview. In: Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (Eds.) *Social Ecology. Society-Nature Relations Across Time And Space*. Springer, forthcoming.

Mayer, A., Schaffartzik, A., Krausmann, F., Eisenmenger, N. 2015. More than the sum of its parts: Patterns in global material flows. In: Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (Eds.) *Social Ecology. Society-Nature Relations Across Time And Space*. Springer, forthcoming.

Schaffartzik, A., Eisenmenger, N., Wiedenhofer, D. 2015. Boundary Issues: Calculating National Material Use for a Globalized World. In: Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (Eds.) *Social Ecology. Society-Nature Relations Across Time And Space*. Springer, forthcoming.

Wiedenhofer, D., Haas, W., Neundlinger, M., Eisenmenger, N. 2015. The role of material stocks for sustainable development. In: Haberl, H., Fischer-Kowalski, M., Krausmann, F., Winiwarter, V. (Eds.) *Social Ecology. Society-Nature Relations Across Time And Space*. Springer, forthcoming.

Eisenmenger, N., Magerl, A. Warr, B. 2016. Trends in Austrian resource efficiency. An exergy and useful work analysis in comparison to material use, CO<sub>2</sub> emissions and land use. *Journal of Industrial Ecology*. Under revision.

Eisenmenger, N., Schaffartzik, A., Wiedenhofer, D., Giljum, S., Bruckner, M., Schandl, H., Wiedmann, T., Lenzen, M., Tukker, A., de Koning, A., 2016. Consumption-Based Material Flow Indicators – Comparing Six Ways of Calculating the Austrian Raw Material Consumption Providing six Results. *Ecological Economics*. Under revision.

Eisenmenger, N., Pereira, H., Giljum, S., Theurl, M., Lutter, S., Marques, A., Tukker, A. 2016. A conceptual framework for linking Resource Efficiency with Biodiversity and Ecosystem Services. *Sustainability*.

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*. accepted.

Wenzlik, M., Eisenmenger, N., Schaffartzik, A., 2015. What Drives Austrian Raw Material Consumption? A Structural Decomposition Analysis for the Years 1995 to 2007: SDA of Austrian Raw Material Consumption. *Journal of Industrial Ecology* 19, 814–824. doi:10.1111/jiec.12341

Schaffartzik, A., Wiedenhofer, D., Eisenmenger, N., 2015. Raw Material Equivalents: The Challenges of Accounting for Sustainability in a Globalized World. *Sustainability* 7, 5345–5370. doi:10.3390/su7055345

Schaffartzik, A., Haberl, H., Kastner, T., Wiedenhofer, D., Eisenmenger, N., Erb, K.-H., 2015. Trading Land: A Review of Approaches to Accounting for Upstream Land Requirements of Traded Products: A Review of Upstream Land Accounts. *Journal of Industrial Ecology* 19, 703–714. doi:10.1111/jiec.12258

Kastner, Thomas, Schaffartzik, Anke, Eisenmenger, Nina, Erb, Karlheinz, Haberl, Helmut, Krausmann, Fridolin, 2014. Cropland area embodied in international trade: Contradictory results from different approaches. *Ecological Economics* 104, 140–144. doi:10.1016/j.ecolecon.2013.12.003

- 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, 294–305. doi:10.1111/jiec.12100
- Schaffartzik, A., Eisenmenger, N., Krausmann, F., Weisz, H., 2014. Consumption-based Material Flow Accounting: Austrian Trade and Consumption in Raw Material Equivalents 1995-2007. *Journal of Industrial Ecology* 18, 102–112. doi:10.1111/jiec.12055
- Schaffartzik, Anke, Mayer, Andi, Gingrich, Simone, Eisenmenger, Nina, Loy, Christian, Krausmann, Fridolin, 2014. The global metabolic transition: Regional patterns and trends of global material flows, 1950–2010. *Global Environmental Change* 26, 87–97. doi:10.1016/j.gloenvcha.2014.03.013
- Wiedenhofer, Dominik, Steinberger, Julia K., Eisenmenger, Nina, Haas, Willi, 2015. Maintenance and Expansion: Modeling Material Stocks and Flows for Residential Buildings and Transportation Networks in the EU25. *Journal of Industrial Ecology* n/a–n/a. doi:10.1111/jiec.12216
- Singh, Simron J. und Eisenmenger, Nina. 2011. How unequal is international trade? An ecological perspective using Material Flow Accounting (MFA). In: *Journal für Entwicklungspolitik* 26(4), S. 57-88.
- UNEP. 2011. Decoupling natural resource use and environmental impacts from economic growth, A Report of the Working Group on Decoupling to the International Resource Panel. Fischer-Kowalski, M., Swilling, M., von Weizsäcker, E.U., Ren, Y., Moriguchi, Y., Crane, W., Krausmann, F., Eisenmenger, N., Giljum, S., Hennicke, P., Romero Lankao, P., Siriban Manalang, A.
- Warr, B., Ayres, R., Eisenmenger, N., Krausmann, F., Schandl, H., 2010. Energy use and economic development: A comparative analysis of useful work supply in Austria, Japan, the United Kingdom and the US during 100years of economic growth. *Ecological Economics* 69, 1904–1917. doi:10.1016/j.ecolecon.2010.03.021
- Steinberger, J.K., Krausmann, F., Eisenmenger, N., 2010. Global patterns of materials use: A socioeconomic and geophysical analysis. *Ecological Economics* 69, 1148–1158. doi:10.1016/j.ecolecon.2009.12.009
- 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, 2696–2705. doi:10.1016/j.ecolecon.2009.05.007
- Eisenmenger, Nina. 2008. Ressourcenproduktivität als politisches Programm und seine Umsetzung in der Praxis. In: Susanne Hartard, Axel Schaffer, Jürgen Giegrich (Hrsg.): *Ressourceneffizienz im Kontext der Nachhaltigkeitsdebatte*. Nomos Verlag
- Krausmann, F., Fischer-Kowalski, M., Schandl, H., Eisenmenger, N., 2008. The Global Sociometabolic Transition: Past and Present Metabolic Profiles and Their Future Trajectories. *Journal of Industrial Ecology* 12, 637–656. doi:10.1111/j.1530-9290.2008.00065.x
- Schandl, H., Poldy, F., Turner, G.M., Measham, T.G., Walker, D.H., Eisenmenger, N., 2008. Australia's Resource Use Trajectories. *Journal of Industrial Ecology* 12, 669–685. doi:10.1111/j.1530-9290.2008.00075.x
- Eisenmenger, Nina, Heinz Schandl, Jesus Ramos-Martin. 2007. Transition in a changed context: patterns of development in a globalizing world. In: Fischer-Kowalski, Marina and Haberl, Helmut (Eds.): *Global environmental change and socio-ecological transitions*. Edward Elgar Cheltenham Bd. 7
- Eisenmenger, Nina, Marina Fischer-Kowalski, Helga Weisz. 2007. Indicators of Natural Resource Use and Consumption. In: Hak, Tomas et al. (Eds.): *Sustainability Indicators. A scientific Assessment*. Washington, D.C.: SCOPE, Island Press.
- Eisenmenger, Nina and Stefan Giljum. 2007. Evidence from Societal Metabolism Studies for Ecological Unequal Trade. In Hornborg, Alf and Carol L. Crumley (Eds.): *The World System and the Earth System: Global Socioenvironmental Change and Sustainability since the Neolithic*. Walnut Creek, CA: Left Coast Press: pp. 288-302.
- Schandl, H., Eisenmenger, N., 2006. Regional Patterns in Global Resource Extraction. *Journal of Industrial Ecology* 10, 133–147. doi:10.1162/jiec.2006.10.4.133

Haberl, Helmut, Helga Weisz, Christof Amann, Alberte Bondeau, Nina Eisenmenger, Karl-Heinz Erb, Marina Fischer-Kowalski, Fridolin Krausmann. 2006. The energetic metabolism of the EU-15 and the USA. Decadal energy input time-series with an emphasis on biomass. *Journal of Industrial Ecology*, 10 (4): 151-171.

Weisz, H., Krausmann, F., Amann, C., Eisenmenger, N., Erb, K.-H., Hubacek, K., Fischer-Kowalski, M., 2006. The physical economy of the European Union: Cross-country comparison and determinants of material consumption. *Ecological Economics* 58, 676–698. doi:10.1016/j.ecolecon.2005.08.016

Giljum, Stefan, Nina Eisenmenger. 2004. North-South Trade and the Distribution of Environmental Goods and Burdens: A Biophysical Perspective. *Journal of Environment and Development*, 13 (1): 73-100.

#### ***Peer-reviewed International Reports***

UNEP, Fischer-Kowalski, M., Dittrich, M., Eisenmenger, N., 2015. *International Trade in Resources: A Biophysical Assessment*, Report of the International Resource Panel. with contributions from: Paul Ekins, Julian Fulton, Thomas Kastner, Karin Hosking, Heinz Schandl, Jim West, and Thomas O. Wiedmann. United Nations Environment Programme, Paris.

UNEP, Fischer-Kowalski, M., Swilling, M., von Weizsäcker, E.U., Ren, Y., Moriguchi, Y., Crane, W., Krausmann, F., Eisenmenger, N., Giljum, S., Hennicke, P., Romero Lankao, P., Siriban Manalang, A., Sewerin, S., 2011. *Decoupling natural resource use and environmental impacts from economic growth*, Report of the International Resource Panel. United Nations Environment Programme, Paris.

UNEP, Schandl, H., Fischer-Kowalski, M., West, J., Giljum, S., Dittrich, M., Eisenmenger, N., Gierlinger, S., Hosking, K., Lenzen, M., Tanikawa, H., Miatto, A., Fishman, T., forthcoming. *Global Material Flows and Resource Productivity*, Report for the UNEP International Resource Panel. United Nations Environment Programme, Paris.

#### ***Working Papers and Reports***

Schaffartzik, A., Eisenmenger, N., Krausmann, F., Milota, E., 2015. *Ressourcennutzung in Österreich – Bericht 2015*. Wien. English: *Resource Use in Austria – Report 2015*

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, 133.

Schaffartzik, Anke, Sachs, M., Wiedenhofer, Dominik, Eisenmenger, Nina, 2014. *Environmentally Extended Input-Output Analysis*. IFF Social Ecology Working Papers No. 154. Institute of Social Ecology, IFF, Alpen-Adria University Klagenfurt-Graz-Vienna, Vienna.

Schaffartzik, Anke, Eisenmenger, Nina, Krausmann, Fridolin, Weisz, Helga. 2013. *Raw Material Equivalents (RME) of Austria's Trade*. IFF Social Ecology Working Papers No. 125. Institute of Social Ecology, IFF, Alpen-Adria University Klagenfurt-Graz-Vienna, Vienna.

Krausmann, Fridolin, Fischer-Kowalski, Marina, Steinberger, Julia K., Schaffartzik, Anke, Eisenmenger, Nina, Weisz, Ulrike, 2011. *Trends and Developments of the Use of Natural Resources in the European Union*. IFF Social Ecology Working Papers No. 123. Institute of Social Ecology, IFF, Alpen-Adria University Klagenfurt-Graz-Vienna, Vienna.

Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft, Bundesministerium für Wirtschaft, Familie und Jugend (Hrsg.). 2011. *Ressourcennutzung in Österreich – Bericht 2011*. Wien. Authors: Nina Eisenmenger, Anke Schaffartzik, Fridolin Krausmann, Eva Milota. English: *Resource Use in Austria – Report 2011*.

Tan, Adrian, Nina Eisenmenger, Stefan Giljum, Shailendra Mugdal, Sarah Lockwood, Marina Fischer-Kowalski, Martin Bruckner. 2011. *Assessment of resource efficiency indicators and targets*. Final Report to the European Commission, DG Environment. Contract number: 07.0307/2010/580623/ETU/C1 implementing Framework Contract number ENV.G.4/FRA/2008/0112

Mudgal, Shailendra, Marina Fischer-Kowalski, Fridolin Krausmann, Blandine Chenot, Sarah Lockwood, Andreas Mitsios, Anke Schaffartzik, Nina Eisenmenger, Franck Cachia, Julia Steinberger, Ulli Weisz, Kaire Kotsalainen, Hubert Reisinger, Eric Labouze. 2010. *Preparatory study for the review of the thematic*



strategy on the sustainable use of natural resources. Contract 07.0307/2009/545482/ETU/G2. Final report for the European Commission (DG Environment).

Krausmann, F., Fischer-Kowalski, M., Eisenmenger, N., Schaffartzik, A., Steinberger, J.K., Weisz, U., 2010. Trends in the Use of Natural Resources. Annex I to the Preparatory Study for the Review of the Thematic Strategy on the Sustainable Use of Natural Resources. Final Report prepared for the European Commission, DG Environment. Institute of Social Ecology, Vienna, Austria.

Weisz, Helga, Fridolin Krausmann, Nina Eisenmenger, Helmut Schütz, Willi Haas, Anke Schaffartzig. 2009. Economy-wide Material Flow Accounting. A Compilation Guide. Luxembourg: Eurostat.

Eisenmenger, Nina, Veronika Gaube, Andreas Mayer, Fernanda Souza Nascimento. 2008. IARU – Integrated Assessment of Resource Use in Lençóis Maranhenses, Northeast Brazil. Final report to the Österreichische Nationalbank – Jubiläumsfond, Project No. 12089. Vienna.

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