

Personal Details

Academic degrees	Mag. rer. nat., Dr. phil.
Current position	Assoc.Prof. for Industrial Ecology at the Institute of Social Ecology (SEC), BOKU University, Department of Economics and Social Sciences (WISO)
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Academic Qualification and Education

August 2016	Habilitation in “Industrial Ecology” at the Institute of Social Ecology, Alpen-Adria-Universitaet
April 2008	Doctor phil. in “Social Ecology” at the Alpen-Adria-Universitaet
Sept. 2001	Mag.rer.nat. (Master of Science) in “Human Ecology and Env. Economics” at the University of Vienna (Individual Diploma at the Univ. of Vienna, WU Vienna, and BOKU University)
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

Professional Positions

2016-ongoing	Associate Professor (50%) and Senior Researcher (50%) at the Inst. of Social Ecology (SEC), BOKU University (since 2018) and at Alpen-Adria University Klagenfurt Wien Graz, AAU (2016-2018)
2012-2016	Assistant Professor, tenure track position (50%) and Senior Researcher (25%) at the Institute of Social Ecology, Vienna (SEC), AAU
2010-2012	Postdoc Ass., tenure track position (50%) at the Inst. of Social Ecology, Vienna (SEC), AAU
2009-2010	Parental leave
2004-2010	Senior researcher and lecturer at the Institute of Social Ecology, Vienna (SEC), AAU
2001-2004	Researcher and lecturer at the Institute of Social Ecology, Vienna (SEC), AAU
1999-2001	Assistant to the Managing Director at Climate Alliance Austria.

Further Activities and institutional responsibilities

Coordination of the research area “social metabolism” at the Inst. for Social Ecology (2010-2018, 2025 ongoing). Co-ordination of the research area “social metabolism” at the Inst. for Social Ecology (2005-2010).

Coordination of academic teaching at the Institute of Social Ecology at AAU, development of the Master study program “Social and Human Ecology” (2002-2005), Member of the Institute’s teaching team at BOKU (since 2018). At BOKU, contribution to the development of the Master Program “Climate Change and Societal Transformation” (2023-2024), participation in the working group developing the Bachelor Program “Navigating (Un)Sustainability” (working title) (since 2024).

Program coordination (Studienprogrammleitung) for the Master Programme “Sozial- und Humanökologie (Social and Human Ecology) at the Alpen-Adria University (2018-2021).

Member of the Working Group “Education for Sustainable Development” (AG BNE) at BOKU, 2018-2024.

Deputy chair of the “Senatsstudienkommission” (Commission of the Senate dealing with teaching issues) at BOKU, 2019-2022. Alternate Member since 2022.

Science-policy dialogue

European Commission and Eurostat: Consultancy for the European Commission. Consultancy for Eurostat as participant in the Eurostat Task Force on Material Flow Accounts (2006, 2007, 2008, 2014), the Eurostat Task Force on Environmental Impacts (2007), the Eurostat MFA training for European Statistical Offices (2005, 2007, 2009, 2013, 2017-2019), and the Eurostat/EFTA Working Group "Environmental Accounts" (May 2007).

Austrian Ministry and Statistics Austria: delegate from the Austrian Ministry of Agriculture, Forestry, Environment and Water Management at UNEP (2007), OECD (2004, 2006, 2007) meetings on resource efficiency and MFA indicators. Consultancy projects to development MFA accounts and indicators at Statistics Austria (MFA headline indicators, material footprint, circular economy). Member of the Austrian Circular Economy Task Force established by the Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK) together with the Austrian Ministry for Economics and Labour (since 2023).

OECD: Consultancy for the OECD in establishing Material Flow Accounts for the OECD countries (2006), an on topics such as sustainable use of resources and resource productivity, and on establishing a coordinated global framework for measuring demand-based material flows 8 (2022).

UN International Resource Panel: Support for Marina Fischer-Kowalski and her participation as research expert in the UNEP International Resource Panel (since 2007), participation in the UNEP International Resource Panel meeting in April 2013, contribution to several IRP Assessment Reports as co-author or through consultation and reviewing.

Membership in professional bodies

2010-2017	Treasurer of the European Society of Ecological Economics (ESEE)
2009-2017	Member of the ESEE Board
2006 ongoing	Member of the International Society of Industrial Ecology (ISIE), Member of the ISIE-Section Socio-Economic Metabolism (SEM)
2005 ongoing	Member of the European Society of Ecological Economics (ESEE)

Projects

since 2001: coordination of 49, co-coordination of 12, and cooperation in a total of 90 (inter)national research projects.

Projects (past 5 years selection)

2025 – 2030	“A Circular Low Carbon EU and the Global South – CIRCEUS” funded by the Connecting Minds Programme of the Austrian Science Fund.
2024 – 2027	“Critical Raw Materials and Circular Economy. Effects of changes in Austrian supply and demand of ‘critical’ raw materials on circular economy and decarbonization – GRACE” funded by the Austrian Climate Research Programme (ACRP). Project coordination.
2024 – 2025	“EEA: Investigating material stocks in Europe” funded by the European Environmental Agency (EEA). Project coordination at BOKU.
2022 – 2024	“Resource Use in Austria, Report 4” funded by the Austrian Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK) and the Austrian Federal Ministry of Finance (BMF). Project Coordination.
2022 – 2023	“City of Vienna as a circular economy? Options and limitations of transforming a city towards circularity – VICE” funded by Jubiläumsfonds der Stadt Wien für die BOKU Wien
2021 – 2022	“MOCAM – Monitoring CO2 emissions and material footprint of the City of Vienna” funded by the City of Vienna. Project Coordination.
2020 – 2023	“Circular Economy and Decarbonisation: Synergies and trade-offs – AceDC” funded by the Austrian Climate Research Programme (ACRP).
2020 – 2023	“EPICUR research”. European Partnership for an Innovative Campus Unifying Regions. EPICUR. European University. Funded by the European Commission, European Universities Initiative. Project Coordination at BOKU.

Academic Teaching

- Teaching: 2003-2019: teaching of 55 lectures/seminars at Institute of Social Ecology, Vienna (SEC), Alpen-Adria Universitaet (AAU).
2020 ongoing: around 52 lectures/courses at the Institute of Social Ecology (SEC), BOKU University.
- MA, Dr Thesis: Master: Since 2010 supervision of 17 and co-supervision of 2 Master Thesis. First examiner in 15 and second examiner in 35 Master exams. Chair of 23 Master exams.
Doctorat: supervision of 2 and co-supervision of 3 Doctoral Thesis. Reviewer of 4 Dissertations, Examiner in 3 and Chair of the Examination Committee in 2 Defenses. Opponent in 1 int. Defense.

Publications (selection)

41 publications in peer-reviewed Journals, 11 chapters in edited volumes, 3 internationally peer-reviewed reports, 18 policy reports and Working Papers.

Peer reviewed journals and book chapters

- Haas, W., A. Baumgart, N. Eisenmenger, D. Virág, G. Kalt, M. Sommer, K. Kratena, and I. Meyer. 2025. How decarbonization and the circular economy interact: Benefits and trade-offs in the case of the buildings, transport, and electricity sectors in Austria. *Journal of Industrial Ecology*: jiec.13619.
- Ünlü, G., et al. 2024. MESSAGEix-Materials v1.1.0: representation of material flows and stocks in an integrated assessment model. *Geoscientific Model Development*: doi:<https://doi.org/10.5194/gmd-17-8321-2024>
- Schandl, H. et al. 2024. Global material flows and resource productivity: The 2024 update. *Journal of Industrial Ecology*: jiec.13593
- Plank, B., N. Eisenmenger, and D. Wiedenhofer. 2022. Austria. In: *A Triple Bottom Line Analysis of Global Consumption. Economic, Environmental, and Social Effects of Pre-Pandemic World Trade 1990-2015*, ed. by Joy Murray, Anne Owen, Moana Simas, and Arunima Malik. Singapore: Jenny Stanford Publishing Pte. Ltd.
- Wieland, H., M. Lenzen, A. Geschke, J. Fry, D. Wiedenhofer, N. Eisenmenger, J. Schenk, and S. Giljum. 2022. The PIOLab: Building global physical input–output tables in a virtual laboratory. *Journal of Industrial Ecology*: jiec.13215.
- Plank, B., N. Eisenmenger, and A. Schaffartzik. 2021. Do material efficiency improvements backfire?: Insights from an index decomposition analysis about the link between CO2 emissions and material use for Austria. *Journal of Industrial Ecology*: jiec.13076.
- Wieland, H., S. Giljum, N. Eisenmenger, D. Wiedenhofer, M. Bruckner, A. Schaffartzik, and A. Owen. 2020. Supply versus use designs of environmental extensions in input–output analysis: Conceptual and empirical implications for the case of energy. *Journal of Industrial Ecology*. <https://doi.org/10.1111/jiec.12975>
- Eisenmenger, N., M. Pichler, N. Krenmayr, D. Noll, B. Plank, E. Schalmann, M.-T. Wandl, and S. Gingrich. 2020. The Sustainable Development Goals prioritize economic growth over sustainable resource use: a critical reflection on the SDGs from a socio-ecological perspective. *Sustainability Science*. <https://doi.org/10.1007/s11625-020-00813-x>
- Giljum, Stefan, Hanspeter Wieland, Stephan Lutter, Nina Eisenmenger, Heinz Schandl, und Anne Owen. 2019. The Impacts of Data Deviations between MRIO Models on Material Footprints: A Comparison of EXIOBASE, Eora, and ICIO. *Journal of Industrial Ecology* 23(4): 946–58. <https://doi.org/10.1111/jiec.12833>.
- Marques, Alexandra, Inês S. Martins, Thomas Kastner, Christoph Plutzer, Michaela C. Theurl, Nina Eisenmenger, Mark A. J. Huijbregts, et al. 2019. Increasing Impacts of Land Use on Biodiversity and Carbon Sequestration Driven by Population and Economic Growth. *Nature Ecology & Evolution*. <https://doi.org/10.1038/s41559-019-0824-3>.
- Stadler, K., et al. 2018. EXIOBASE 3: Developing a Time Series of Detailed Environmentally Extended Multi-Regional Input-Output Tables: EXIOBASE 3. *Journal of Industrial Ecology*. <https://doi.org/10.1111/jiec.12715>
- Plank, B., Eisenmenger, N., Schaffartzik, A., Wiedenhofer, D., 2018. International Trade Drives Global Resource Use: A Structural Decomposition Analysis of Raw Material Consumption from 1990–2010. *Environmental Science & Technology*. <https://doi.org/10.1021/acs.est.7b06133>

Working Papers and Reports

BMK, BMF. 2024. Resource Use in Austria. Report 4. Circular Economy. Authors: N. Eisenmenger, A. Baumgart, H.P. Wieland, F. Krausmann, W. Haas, M. Neubauer, S. Gierlinger.

Eisenmenger, N., Kaufmann, L., Kalt, G., Dorninger, C., Perkovic, M., Lutter, S., Lederer, J., Fellner, J. 2022. CO2 and material footprint of Vienna. Analysis of Vienna's resource use in relation to the targets formulated in the Smart Climate City Strategy. Final Report (german). <https://www.wien.gv.at/wirtschaft/standort/pdf/mocam.pdf>

Vogel, J., Kratena, K., Eisenmenger, N.. 2021. Synergien zwischen nachhaltiger Ressourcennutzung und Klimaschutz. Pilotstudie zur Modellierung von Materialflüssen im MIO-ES-Modell des Umweltbundesamtes. (Synergies between sustainable resource use and climate change mitigation.) Umweltbundesamt GmbH, Wien.

Giljum, S., Lutter, S., Eisenmenger, N., Schandl, H.. 2022. Establishing a coordinated global framework for measuring demand-based material flows – Revised draft roadmap. Consultant report. OECD, Environment Directorate, Environment Policy Committee. ENV/EPOC/WPEI(2022)8/REV1

Giljum, S., Lutter, S., Streeck, J., Eisenmenger, N., Wiedenhofer, D., Schandl, H.. 2022. Draft guidance on measuring demand-based material flows. Consultant report. OECD, Environment Directorate, Environment Policy Committee. ENV/EPOC/WPEI(2022)7/REV1

BMK, BMLRT. 2020. Resource Use in Austria 2020. Report 3. Authors: N. Eisenmenger, B. Plank, E. Milota, S. Gierlinger. <https://www.bmf.gv.at/en/topics/mining/mineral-resources-policy/resource-use-in-austria.html>

Krausmann, F., Weisz, H., Eisenmenger, N., Schütz, H., Haas, W., Schaffartzik, A. 2018. Economy-wide Material Flow Accounting. Introduction and Guide. Version 1.2. Social Ecology Working Paper 151.

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. 2016. Global Material Flows and Resource Productivity, Report for the UNEP International Resource Panel. United Nations Environment Programme, Paris.

BMLFUW and BMWFW. 2015. Ressourcennutzung in Österreich – Bericht 2015. AutorInnen: Anke Schaffartzik, Nina Eisenmenger, Fridolin Krausmann, Eva Milota. English: Resource Use in Austria – Report 2015.

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.

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.