

Jun-Prof Dr
Lisa Biber-Freudenberger



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Research Expertise

Junior Professor for Sustainable Development –
Land Use Synergies and Conflicts

Interdisciplinary, Transdisciplinary and Participatory
Research on the Interactions between Climate Change,
Biodiversity, and Human Wellbeing in the Land Use Context

Integration of quantitative and qualitative methodologies
for policy evaluation and to support governance and
decision making in the context of landscape planning

Research on Science-Policy-Interfaces with a focus on
synergies and conflicts between different land use priorities

Work and Practical Experience

Since 07/2020 Junior-Professor and Research Group Leader at the Center for Development Research, Bonn University (Germany)

Junior-Professor for Sustainable Development – Synergies and Conflicts at the Center for Development Research and leader of the research group Biodiversity and Sustainable Land Use (LAND). Development and application of qualitative and quantitative research approaches and supervision of master and doctoral students. Writing of grant proposals and participation in different interdisciplinary and international research consortia. Participation in self-governance structures of the University, teaching in different study programs within and outside the University as well as work supporting the third mission of the university including public and social engagement (e.g. in the context of the Scientists for Future or the Biodiversity Network Bonn).

Specific research and other activities include for example:

- Research Group Leader within the project LANUSYNCON (At the Science Policy Interface: LAND Use SYnergies and CONflicts within the framework of the 2030 Agenda) focussing on trade-offs between biodiversity conservation and human development and the role of science policy interfaces in the context of decision making
- Principal Investigator in a research project in collaboration with the Federal Agency for Nature Conservation on The Social Dimension of Research and Implementation of Nature-based solutions: Utilising Synergies for Biodiversity and Climate (BioClimSocial)
- Principal Investigator in a DFG project on The impacts of land use change and biodiversity loss on health an emerging infectious diseases ArboEmerge
- Principal Investigator in the CRC228 – Future Rural Africa. Project A05 Future Roads focussing on the social and environmental impacts of road development
- Co-Chair of the Biodiversity Network Bonn (BION)
- Lead Author of the UN IPBES Nexus Assessment of the Interlinkages among Biodiversity, Water, Food and Health
- Member of the Eclipse Methods Expert Group (a EU Science-Policy-Interface)
- Member of the Roadless Areas Initiative
- FAO financed Regional study in Southeast Europe, Central Asia and the Caucasus on the impacts of climate change on pest and plant disease spread

11/2016-06/2020 Senior Researcher at the Center for Development Research, Bonn University (Germany)

Senior Researcher at the Center for Development Research within the Project STRIVE (Sustainable TRade and InnoVation transfer in the bioEconomy) focussing on indicator-based sustainability evaluation of different bioeconomy strategies and scenario-based modelling of policy implementation including case studies in developing and emerging economies on landscape and regional scale (strive-bioecon.de). Additional involvement in and implementation of the following projects and activities:

- Summer School on Green and social Entrepreneurship for Biodiversity Conservation and Local Development (www.socialenviropreneur.wordpress.com)
- WABES - Supporting the West African contribution to IPBES (www.wabes.org)

- German Bolivian Partnership for integrating Biodiversity Measures in Environmental Impact Assessments (www.zef.de/biodiv-eia)
- Diversifying agriculture for balanced nutrition through fruits and vegetables in multi-storey cropping systems (NutriHaf)
- Improved application strategies for entomopathogenic fungi (EPF) as biological control agents in integrated pest management (IPM) of agricultural pests

Responsibilities: Research conceptualization and proposal writing, collaboration with international partners, scientific data analysis, and preparation of peer-reviewed publications, presenting at different scientific conferences, tutoring and lecturing of doctoral and master students and selection of doctoral program candidates and DAAD stipend recipients.

10/2015 – 10/2016 Career Break for Maternity Leave

Parental leave to bring up my son until he was old enough to visit a day-care facility. Continued involvement in proposal development (e.g. STRIVE and WABES), ongoing data analysis and publication of results in peer-reviewed journals (e.g. within “Improved application strategies for entomopathogenic fungi (EPF) as biological control agents in IPM of agricultural pests”)

04/2013 – 10/2015 Senior Researcher at the Center for Development Research, Bonn University (Germany)

Senior Researcher at the Center for Development Research and team member of the project WASCAL (West African Science Service Center on Climate Change and Adapted Land Use) as project manager and controller (www.wascal.org). Additional involvement in the following projects:

- German Bolivian Partnership for integrating Biodiversity Measures in Environmental Impact Assessments (www.zef.de/biodiv-eia)
- Improved application strategies for entomopathogenic fungi (EPF) as biological control agents in integrated pest management (IPM) of agricultural pests

Responsibilities: proposal writing, scientific data analysis and spatial modelling, teaching, publishing, doctoral, and master student tutoring and supervision, selection of doctoral program candidates and DAAD stipend recipients, senior researcher representative in the ZEF directorate.

11/2012 – 03/2013 Scientific Assistant at the Center for Development Research, Bonn University (Germany)

Scientific Assistant at the Center for Development Research and team member of the project WASCAL (West African Science Service Center on Climate Change and Adapted Land Use) responsible for the completion of project controlling reports and financial planning.

01/2012 – 11/2012 Scholar of the Potsdam Graduate School (Germany)

Stipend for the completion of dissertation

04/2009 – 12/2011 *Research Associate at the University for Sustainable Development Eberswalde (Germany)*

Dissertation in the Cooperative Graduate Programme Adaptive Nature Conservation under Climate Change at the University for Sustainable Development, the Potsdam Institute for Climate Impact Research and Potsdam University, publication and presentation of research results, GIS data generation and statistical analysis, collaboration with external partner institutions, participation in teaching activities, supervision of bachelor and master students, project management and publicity work

09/2008 – 01/2009 *Freelancer and Online Editor at Stellenboersen.de, Göttingen (Germany)*

Member of the online editorial team of Stellenboersen.de researching and editing articles for various websites in HTML and development and design of homepage layout

10/2007 – 12/2007 *Intern at the Park Management of the Korup National Park in Mundemba (Cameroon)*

Development of an ecotourism-concept for small villages located around the Korup National Park, revision of tourist guides, assisting research on feeding ecology and social structures of drills (*Mandrillus Leucophaeus*), DAAD stipendee

09/2007 – 10/2007 *Consultant for the Federal Ministry for Environment, Nature Conservation and Nuclear Safety in Bonn (Germany)*

Spokesperson for the ministry for press conferences and interviews at the campaign tour in preparation of the 9th conference of parties of the UN “Convention on Biological Diversity”

08/2007 – 09/2007 & 01/2006 – 04/2006 *Intern at the Department for international Nature Conservation of the Federal Ministry for Environment, Nature Conservation and Nuclear Safety in Bonn (Germany)*

Member of the German delegation at the 8th meeting of the German-Russian working group for nature conservation, preparation and publishing of articles and reports for research and development projects, participation in conferences e.g. as a member of the German Delegation at the 8th Conference of Parties of the Convention on Biological Diversity of the United Nations in Curitiba/Brazil

Education & Training

04/2009 – 11/2013 *Doctoral Degree (Dr. rer. nat.) in Biodiversity Research*

Cooperative Graduate Program „Adaptive Nature Conservation under Climate Change“ at the University for Sustainable Development Eberswalde, University of Potsdam and Potsdam Institute for Climate Impact Research/Germany,

Dissertation: “Adaptation of nature-conservation to global change: an ecosystem-based approach to priority-setting”, Defence 6. November 2013

Supervision: Professor Pierre Ibisch (University for Sustainable Development in Eberswalde), Professor Jasmin Joshi (University of Potsdam) and Professor Wolfgang Cramer (Potsdam Institute for Climate Impact Research)

04/2007 – 03/2009 Master of Science (M.Sc.) in International Nature Conservation

Bi-national studies in “International Nature Conservation” in cooperation of Georg-August-University Göttingen/Germany and Lincoln University (New-Zealand),
Master thesis: “Habitat Modelling of Kea *Nestor notabilis* Nesting Sites”,
Supervision: Professor Christoph Scherber and Dr Stefan Erasmi (University of Göttingen)

10/2003 - 08/2006 Bachelor of Science in Biology (B.Sc.)

Studies in Biology of Organisms with an emphasis on animal behaviour and ecology University of Osnabrück (Germany), Bachelor thesis: “Breeding Success and Chicks’ mortality of Lapwings *Vanellus vanellus* and Black-tailed godwits *Limosa limosa*”,
Supervision: Professor Heinz Düttmann and Professor Rüdiger Schröpfer (University of Osnabrück)

Scientific Memberships and Awards

Reviewer for various peer-reviewed Journals including

Applied Agricultural and Forestry Research; Biodiversity and Conservation; Ecography; Ecological Indicators; Economics; Ecosystem Services; Energy, Ecology and Environment; Entomological Research; Environmental Monitoring and Assessment; Journal of Environmental Management; Land; Sustainability; Science of the Total Environment Sustainability

Board and Committee Memberships and Awards

Co-Chair of the Biodiversity Network BION Bonn and Rhein-Sieg since April 2024

Positive interim evaluation of Junior Professorship in July 2023

Short Listed (2nd Place) for the W2 tenure track W3 Professorship Development of Urban and Rural Regions at the University of Bonn in 2023

Short Listed (3rd Place) for the W2 Professorship Sustainable Land Use and Climate Change Mitigation at Kassel University in 2022

Lead Author of the IPBES Spatial Planning and Connectivity Assessment since 2025

Lead Author of the IPBES Nexus Assessment: Thematic assessment of the interlinkages among biodiversity, water, food and health

Steering Board Member of the CRC Future Rural Africa (2022-2025)

Member of different selection committees from DAAD and the African Academy of Sciences

Member of the Scientists for Future

Member of the Eklipse Methods Expert Group (a EU Science-Policy-Interface, www.eklipse-mechanism.eu)

Member of the Roadless Areas Initiative (www.roadless.online)

Publons Peer Reviewer Award 2018 for placing in the top 1% of reviewers in Environment/Ecology

Member of the Scientific Committee of the 5th European Congress on Conservation Biology (ECCB)

Publications

(ORCID 0000-0001-8106-5372, Google Scholar Citation h-Index 23)

On a preprint server

Ansari, M. R., Rafiee, M., Esmail, B. A., Kempa, D., Kuhn, T., Biber-Freudenberger, L., & Albert, C. (2025). Mapping and assessing ecosystem service hotspots and bundles in rapidly urbanizing, data-scarce regions: a case study of Kabul, Afghanistan. Available at <https://doi.org/10.21203/rs.3.rs-7130094/v1>

Becker, M., Börner, J., Biber-Freudenberger, L., & Heckeley, T. (2025). Land System Transitions in Rural Africa: Developing Embedded Middle-Range Theories of Change. Available at SSRN 5197012.

Bohn, F. J.; Sioen, G. B.; Bastos, A.; Ernst, Y.; Jarzebski, M.; Koh, N. S.; Martin, R.; Rammig, A.; Godoy-Faúndez, A.; Gasparatos, A.; Gutiérrez, Á. G.; Aceituno, A. J.; Horcea-Milcu, A.-I.; Marais-Potgieter, A.; Sharifi, A.; Howe, C.; Krug, C. B.; Acosta, E. E.; Nzunda, E. F.; Andersson, E.; Pörtner, H.-O.; Sooväli-Sepping, H.; Hiroe, I.; Palmegiani, I.; Coetzer, K.; Thonike, K.; Tanalgo, K.; Biber-Freudenberger, L.; Ogue, N. O.; Park, M. S.; Gross, M.; De La Cruz, P.; Prist, P. R.; Bi, P.; Rivera, D.; Isaac, R.; McFarlane, R.; Paulus, S. J.; Burkhart, S.; Lee, S.-C.; Müller, S.; Terhile, U. D.; Shih, W.-Y.; Smith, W. K.; Hakkarainen, V.; Murray, V.; Yoshida, Y.; Damtew, Y. T.; Niazi, Z. (2025): Reviews and syntheses: Current perspectives on biosphere research — from poly-crisis to poly-solutions. Preprint. DOI: 10.5194/egusphere-2025-3619.

Falk, S., Ekchajzer, D., Pirson, T., Lees-Perasso, E., Wattiez, A., Biber-Freudenberger, L., ... & van Wynsberghe, A. (2025). More than Carbon: Cradle-to-Grave environmental impacts of GenAI training on the Nvidia A100 GPU. Available at arXiv preprint arXiv:2509.00093.

Mtweve, P., Eustace, A., Nyanghura, Q., Moseti, V., Kramm, T., Ibisch, P., & Biber-Freudenberger, L. (2025). An Integrated Decision Support Framework for Sustainable Road Planning in Biodiversity Hotspots. Available at <https://doi.org/10.21203/rs.3.rs-7419361/v1>

Forthcoming

Biber-Freudenberger, L. (in press) Wie kann nachhaltige und sozial gerechte Landnutzung gelingen? Forschungsbeitrag im Jahrbuch für Christliche Sozialwissenschaften (Bd. 66/2025)

Velander, S., Wagner, N., Biber-Freudenberger, L. (in press) Science-Policy Interfaces and Sustainable Development: Institutionally Bridging the Knowledge-Action Gap, in Brown, A. and Gilban, S. Rethinking Sustainability: Principles and Practice (Springer)

2025

Ali, F. S. M., Sommer, J. H., Borgemeister, C., & Biber-Freudenberger, L. (2025). Participatory and non-participatory forest ecosystem services valuation in Sub-Saharan Africa: a systematic literature review. *Discover Sustainability*, 6(1), 199.

Biber-Freudenberger, L., Bogner, C., Bareth, G., Bollig, M., Dannenberg, P., Diez, J. R., ... & Börner, J. (2025). Impacts of road development in sub-Saharan Africa: A call for holistic perspectives in research and policy. *iScience*, 28(2).

- Biber-Freudenberger, L., Kamau, J. W., Whitney, C., & Mattsson, B. (2025). Comparing nature conservation policies using a Bayesian belief network: Modeling sequential effects on adoption, farming practices, and biodiversity. *Conservation Science and Practice*, 7(10), e70146.
- Dingha, C. B., Biber-Freudenberger, L., Mbanga, L. A., & Kometa, S. S. (2025). Community-based valuation of wetland ecosystem services: insights from Bamenda, Cameroon. *Wetlands Ecology and Management*, 33(1), 1-22.
- Franzke, C., Nyamari, N., Mäsgen, J., Otieno, D., Biber-Freudenberger, L., & Bogner, C. (2025). A systematic analysis of legal disputes on road development in Kenya. *Review of Regional Research*, 1-29.
- Gilgan, S., Avilés-Irahola, D., Balogun, K., Beuchelt, T., Biber-Freudenberger, L., Brüntrup, M., ... & Wanderley, F. (2025). Plural sustainabilities: reflections and ways ahead. ZEF Working Paper 246.
- Haines-Matos, V., Kozban, I., Bassil, N., Chaudhary, S., Ghassibe, C., Hynek, N., ... & Biber-Freudenberger, L. (2025). The Social Dimension of Nature-based Solutions: Guidance Report. BfN Schriften 757/2025. Doi: 10.19217/skr757.
- Luu, T. T. G., Luedeling, E., Biber-Freudenberger, L., & Whitney, C. (2025). How to bridge the last mile in agro-climate service adoption? The importance of farmers' needs, attitudes and interpersonal relations in understanding impact pathways. *Environment, Development and Sustainability*, 27(5), 11885-11904.
- Mtweve, P., Moseti, V., Mahmoud, N., Kramm, T., Bogner, C., Ibisch, P., & Biber-Freudenberger, L. (2025). Exploring socioeconomic and environmental impacts of road infrastructure development in Sub-Saharan Africa: A systematic literature review. *Environmental Development*, 54, 101177.
- McElwee, P. D., Sitas, N., Ley, D., Glavovic, B. C., Herrero, M., Biber-Freudenberger, L., Campbell, D., Cavanagh, C. J., Cherubini, F., Dasgupta, P., Eriksen, S. H., Harrison, P. A., Jarvis, R. M., Kuiken, T., Luque, S., Lynch, A. J., Mangalagu, D., McFarlane, R. A., Phang, S. C., Prist, P. R., Rounsevell, M. D. A., Samoilys, M., Sangha, K. K., Selomane, O., Sietz, D., Smith, P., Spierenburg, M., Vallet, A., Williams, D. R., and Xie, L. (in press). Chapter 7: Summary and synthesis of options, knowledge and technology gaps and capacity development. In: Thematic Assessment Report on the Interlinkages among Biodiversity, Water, Food and Health of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. McElwee, P. D., Harrison, P. A., and van Huysen, T. L. (eds.). IPBES secretariat, Bonn, Germany. <https://doi.org/10.5281/zenodo.13850355>
- Prist, P. R., Seppelt, R., Hayman, D. T. S., Molua, E. L., Arneth, A., Biber-Freudenberger, L., Bukvareva, E., Chaudhary, S., Dubey, P. K., Fischer, J., Földvári, G., Godoy-Faúndez, A., Howe, C., Hussain, A., Lorilla, R. S., Maire, E., Materu, S. F., Miyake, Y., Türkmen, A., and Vanham, D. (in press). Chapter 2: Status and past trends of interactions in the nexus. In: Thematic Assessment Report on the Interlinkages among Biodiversity, Water, Food and Health of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Harrison, P. A., McElwee, P. D., and van Huysen, T. L. (eds.). IPBES secretariat, Bonn, German. <https://doi.org/10.5281/zenodo.13850301>

Souza, P. O., Callo-Concha, D., Kamau, H., de Souza Fernandes, L. C., Zabini, C., & Biber-Freudenberger, L. (2025). Are Stakeholders Aware of the Contributions of Ecosystem Services for Their Well-Being? A Case Study of a UNESCO Geopark Project in Brazil. *Human Ecology*, 1-14.

Tran, U., Jafari, Y., Biber-Freudenberger, L., Partelow, S., & Börner, J. (2025). Market standards and domestic growth in aquaculture: Heterogeneous effects of non-tariff measures across relevant aquaculture production contexts. *Aquaculture*, 742976.

2024

Dotzhauer, M., Biber-Freudenberger, L., Dietz T., (2024) The Rise of Sustainability Provisions in International Investment Agreements. *Global Environmental Politics*, 1-27.

Falk, S., van Wynsberghe, A., Biber-Freudenberger, L. (2024) The attribution problem of a seemingly intangible industry. *Environmental Challenges*, 101003.

Luu, T.T.G., Luedeling, E., Biber-Freudenberger L., Whitney C. (2024) How to bridge the last mile in agro-climate service adoption? The importance of farmers' needs, attitudes and interpersonal relations in understanding impact pathways. *Environment, Development and Sustainability*, 1-20.

Luu, T.T.G., Luedeling, E., Whitney C., Biber-Freudenberger L. (2024) Stakeholder engagement in agro-climate service planning. *Climate Services* 33, 100432.

Nyanghura Q. M., Biber-Freudenberger L., Börner, J. (2024), Incentives for Biodiversity Conservation under Asymmetric Land Ownership. *Ecological Economics* 219, 108152.

Nyanghura, Q. M., Börner, J., & Biber-Freudenberger, L. (2024). Motivational drivers and the effectiveness of conservation incentives. *Frontiers in Sustainable Food Systems*, 8, 1493672.

San S.M., Kumar N., Biber-Freudenberger, L., Schmitt, C.B. (2024) Policy Evaluation and Monitoring of Agricultural Expansion in Forests in Myanmar: An Integrated Approach of Remote Sensing Techniques and Social Surveys. *Land* 13(2), 150.

Tran, U., Laibach, N., Bröring, S., & Biber-Freudenberger, L. (2024). Fostering bioeconomic transformation: Identifying spatial predictors for biocluster establishment in Vietnam's agricultural sector. *Journal of Cleaner Production*, 482, 144225.

2023

Biber-Freudenberger, L. (2023) Biomasse – Eine begrenzte Ressource. *Spektrum der Wissenschaften* 12.32.

Biber-Freudenberger, L., Bogner, C. (2023) Klima- und Landnutzungswandel in Subsahara-Afrika. In *Afrikanische Zukünfte- Klimawandel, Landwirtschaft, Biodiversität*. Geographische Rundschau.

Jendritzki, I.G., Tonnang, H.E.Z, Calatayud, P-A, Borgemeister, C., Johansson, T., Biber-Freudenberger, L. (2023) Uncertainties in the Effectiveness of Biological Control of Stem Borers under different Climate Change Scenarios in Eastern Africa. *Climatic Change* 176 (5), 56.

Kamau H.N., Roman, S., Biber-Freudenberger L. (2023) Nearly half of the world is suitable for diversified farming for sustainable intensification. *Communications Earth & Environment*, doi.org/10.1038/s43247-023-01062-3.

Mon San, S., Kumar, N., Biber-Freudenberger, L., Schmitt C. (2023) Agroforestry-based community forestry as a large-scale strategy to reforest agricultural encroachment areas in Myanmar: ambition vs. local reality. *Annals of Forest Science* 80, 27.

Wagner, N., Velandar, S. Biber-Freudenberger, L. Dietz, T. (2023) Effectiveness factors and impacts on policymaking of science-policy interfaces in the environmental sustainability context. *Environmental Science & Policy* 140, 56-67.

Whitney, C., Biber-Freudenberger L., Luedeling E. (2023) Decision analytical methods for assessing the efficacy of agroecology interventions. *CABI Agriculture and Bioscience* 4 (1), 11.

2022

Aviles, D., Mora-Motta, A., Barbosa Pereira, A., Bharati, L., Biber-Freudenberger, L., Petersheim, C., Quispe-Zuniga, M.R., Schmitt, C.B., Youkhana, E. (2022). Integrating scientific and local knowledge to address environmental conflicts: the role of academia. *Human Ecology* 50(5), 911-923.

Dietz, T., Biber-Freudenberger, L. Deal, L., Börner, J. (2022). Is private sustainability governance a myth? Evaluating the success of major sustainability certifications in primary production? A qualitative meta-study. *Ecological Economics* 201, 107546.

Kamau, H. N., Tran, U., Biber-Freudenberger, L. (2022). A long way to go: gender and diversity in land use science. *Journal of Land Use Science*, 1-19, doi.org/10.1080/1747423X.2021.20150

Kamau, J. W., Schader, C., Biber-Freudenberger, L., Stellmacher, T., Amudavi, D. M., Landert, J., Blockeel, J., Whitney, C., Borgemeister, C. (2022) A holistic sustainability assessment of organic (certified and non-certified) and non-organic smallholder farms in Kenya *Environment, Development and Sustainability* 9 (2), 1-38, doi.org/10.1007/s10668-021-01736-y

Luu, T.T.G, Whitney, C.; Biber-Freudenberger, L.; Luedeling, E. (2022) Decision analysis of agro-climate service scaling – A case study in Dien Bien District, Vietnam. *Climatic Services* 27, 100313.

Martinelli, F.S. Biber-Freudenberger, L.; Stein, G.; Börner, J. (2022) Will Brazil's push for low-carbon biofuels contribute to achieving the SDGs? A systematic expert-based assessment. *Cleaner Environmental Systems* 5, 100075.

Stark, S., Biber-Freudenberger, L., Dietz, T., Escobar, N., Förster, J.J., Henderson, J., Laibach, N., Börner, J. (2022) Sustainability implications of transformation pathways for the bioeconomy. *Sustainable Production and Consumption* 29, 215-227, doi.org/10.1016/j.spc.2021.10.011

Velandar, S., Silva Martinelli, F., Idam Sari, D., Ali, F., Biber-Freudenberger, L. (2022). A dichotomy of domestic and academic pathways: challenges of motherhood in an international doctoral program on land science. *Journal of Land Use Science*, 17 (1), 226-244, doi.org/10.1080/1747423X.2021.201500.

2021

Förster, J. J., Downsborough, L., Biber-Freudenberger, L., Mensuro, G. K., & Börner, J. (2021). Exploring criteria for transformative policy capacity in the context of South Africa's biodiversity economy. *Policy Sciences*, 54(1), 209-237, doi.org/10.1007/s11077-020-09385-0

Hermans, K., Berger, E., Biber-Freudenberger, L., Bossenbroek, L., Ebeler L., Groth, J., Hack, J., Hanspach, J., Hintz, K. S., Kimengsi, J. N., Kwong, Y. M., Oakes, R., Pagogna, R., Plieninger, T., Sterly, H., van der Geest, K., van Vliet, J., Wiederkehr, C. (2021) Crisis-induced disruptions in place-based social-ecological research as opportunity for redirection. *GAIA - Ecological Perspectives for Science and Society*, 30 (2), 72-76, doi.org/10.14512/gaia.30.2.3

Mponela, P. Shrestha, S. Biber-Freudenberger, L. 2021. Climate change impacts on 20 major crop pests in Central Asia, the Caucasus and Southeastern Europe. Ankara, FAO and University of Bonn. doi.org/10.4060/cb5954en

2020

Biber-Freudenberger, L., Ferrara, V., Gibassier, D., Glover, J., Grabs, J., Grace, M., Hörmann, S., Targetti, S. (2020). How can environmental regulators support businesses to improve the outcomes of their operations for biodiversity, with a focus on small and medium-sized enterprises in the food and beverage sector in Europe? Report prepared by an EKLIPSE Expert Working Group. UK Centre for Ecology & Hydrology, Wallingford, United Kingdom.

Biber-Freudenberger, L., Ergeneman, C., Förster, J. J., Dietz, T., & Börner, J. (2020). Bioeconomy futures: Expectation patterns of scientists and practitioners on the sustainability of bio-based transformation. *Sustainable Development*, doi.org/10.1002/sd.2072

Guimapi, R. A., Mohamed, S. A., Biber-Freudenberger, L., Mwangi, W., Ekesi, S., Borgemeister, C., & Tonnang, H. E. (2020). Decision Support System for Fitting and Mapping Nonlinear Functions with Application to Insect Pest Management in the Biological Control Context. *Algorithms*, 13(4), 104. doi.org/10.3390/a13040104

Guimapi, R. A., Mohamed, S. A., Ekesi, S., Biber-Freudenberger, L., Borgemeister, C., & Tonnang, H. E. (2020). Optimizing spatial positioning of traps in the context of integrated pest management. *Ecological Complexity*, 41, 100808, doi.org/10.1016/j.ecocom.2019.100808

Nascimento, N., West, T. A., Biber-Freudenberger, L., Sousa-Neto, E. R. D., Ometto, J., & Börner, J. (2020). A Bayesian network approach to modelling land-use decisions under environmental policy incentives in the Brazilian Amazon. *Journal of Land Use Science*, 15 (2-3), 127-141, doi.org/10.1080/1747423X.2019.1709223

2019

Duguma, M.S., Feyssa, D. H., Biber-Freudenberger, L. (2019) Agricultural Biodiversity and Ecosystem Services of Major Farming Systems: A Case Study in Yayo Coffee Forest Biosphere Reserve, Southwestern Ethiopia. *Agriculture* 9(3), 48, doi.org/10.3390/agriculture9030048

Kamau, J.W., Biber-Freudenberger, L., Lamers, J.P.A, Stellmacher, T., Borgemeister C. (2019) Soil fertility and biodiversity on organic and conventional smallholder farms in Kenya. *Applied Soil Ecology*, 134, 85-97, doi.org/10.1016/j.apsoil.2018.10.020

2018

Biber-Freudenberger, L., Denich, M., Whitney, C. (2018) More inter- and trans-disciplinary research needed in agroecology. *Rural* 21 02/18 31:33.

Biber-Freudenberger, L., Kumar Basukala, A., Bruckner M., Börner, J. (2018) Sustainability Performance of National Bio-Economies. *Sustainability* 2018:10, 2705; doi:10.3390/su10082705.

Hoff, H., Johnson, F. X., Allen, B., Biber-Freudenberger, L. and Förster, J. J. (2018). Sustainable Bio-Resource Pathways towards a Fossil-Free World: The European Bioeconomy in a Global Development Context. Policy paper produced for the IEEP Think2030 conference. Institute for European Environmental Policy (IEEP), Brussels

Kamau, J. W., Stellmacher, T., Biber-Freudenberger, L., Borgemeister, C. (2018) Organic and conventional agriculture in Kenya: A typology of smallholder farms in Kajiado and Murang'a counties. *Journal of Rural Studies*, 57:171-185, doi.org/10.1016/j.jrurstud.2017.12.014

Melaku, M., Hundera, K., Biber-Freudenberger, L. (2018) Planting Fruits and Vegetables in Homegarden as a Way to Improve Livelihoods and Conserve Plant Biodiversity. *Agriculture* 8(12):190, <https://doi.org/10.3390/agriculture8120190>

2017

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Academic Supervision and Tutoring

Ongoing Supervision and Tutoring of Doctoral Students

Vanessa Haines-Matos: “At the nexus of Biodiversity and Climate: The social dimension of research and implementation of nature-based solutions” doctoral student at the Agricultural Faculty since 2023, first supervisor

Maureen Nabatanzi: “Modelling the distribution of arboviruses under land use, biodiversity, and climate changes in Uganda”, member of the ZEF doctoral program since 2022, first supervisor

Vincent Mosetti: “The political economy of road infrastructure development and evaluation of socioecological impacts of roads in Kenya and Namibia”, member of the ZEF doctoral program and the CRC Future Rural Africa since 2022, first supervisor

Sophia Falk: “The environmental impacts of Artificial Intelligence”, doctoral student at the Sustainable AI Lab since 2022, second supervisor

Uyen Tran: “Quantifying the impacts of trade in non-food biomass on ecosystems for biodiversity conservation”, doctoral student at the Agricultural Faculty since 2022, second supervisor

Mahmoud Nady: “Global Implementation of Nature-Based Solutions: Analyzing Drivers, Barriers, and Their Impact on the Climate-Health Nexus for Enhanced Human Resilience”, member of the ZEF doctoral program since 2021, first supervisor

Fatima Ali: "Participatory Approaches to Valuing and Modeling Forest Ecosystem Services in Sudan", member of the ZEF doctoral program since 2020, first supervisor

Philipo Jacob: "Synergies and conflicts between infrastructure development and biodiversity conservation in the Greater Serengeti Ecosystems", member of the ZEF doctoral program since 2020, first supervisor

Sara Velander: "Assessing the role of Science-Policy-Interfaces in land use conflicts and synergies", member of the ZEF doctoral program since 2020, second supervisor

Fernanda Martinelli: "Measuring bioeconomy's contributions to the Sustainable Development Goals achievement", member of the ZEF doctoral program since 2018, tutor and second supervisor.

Completed Supervision and Tutoring of Doctoral Students

Dr. Hannah Nyakio Kamau: "Synergies and tradeoffs of diversification in agriculture: evaluation of knowledge producers, farming systems and decision making", member of the ZEF doctoral program (2020-2025), first supervisor

Dr. Su Mon San: "Assessment on forest governance in Reserved Forests in order to support the Nationally Determined Contribution (NDC) of Myanmar", member of the ZEF doctoral program (2019-2025), second supervisor.

Dr. Niklas Wagner: "Institutional Performance of Science Policy Interfaces in the One Health Context", member of the ZEF One Health Graduate School (2020-2025), tutor and advisor

Dr. Qambemeda Masala Nyanghura: "Effectiveness of conservation policies in restoration of ecological corridors of Tanzania", member of the ZEF doctoral program since (2020-2025), first supervisor

Dr. Anna Hennecke: "Doing more with less – Identifying opportunities for sustainable agricultural intensification with Life Cycle Assessment", member of the ZEF doctoral program, (2009-2024) second supervisor after 2022.

Dr. Thi Thu Giang Luu: "Ex-ante evaluation of agricultural climate information services in Vietnam", doctoral student at the agricultural faculty (2019-2023), second supervisor

Dr. John Mwaniki Ndungu: "Productivity, profitability and sustainability of organic and conventional farming system," member of the ZEF doctoral program (2017-2021), tutor

Dr. Juliet Wanjiku Kamau: "Sustainability of organic and non-organic smallholder farms in Kenya", part of the ZEF doctoral program (2014-2018), tutor

Supervision of completed Master and Bachelor Theses

Waing Thinzar Moe: Comparative Valuation of Ecosystem Services Across Countries and Genders: A Study in Brazil, Ethiopia, Namibia, Sudan, and Zambia, submitted to the University of Bonn for the Master of Science in Agricultural Sciences and Resource Management in the Tropics and Subtropics (2025), 1st Supervisor

Muhammed Kabbani: Impacts of Roads on Biodiversity using GIS and Remote Sensing Data in Kenya, submitted to the University of Bonn for the Master of Science in Geodetic Engineering (2025), 1st Supervisor

Judith Musa: Envisioning Future Human-Nature-Relationships: Understanding the impact of roads in the KAZA Region, Namibia, submitted to the University of Bonn for the Master of Science in Geography of Environmental Risks and Human Security (2024), 1st Supervisor

Slavena Manolova: “The impacts of land use and land cover on Malaria Transmission in Kenya: Evidence from a participatory system approach”, submitted to the Rhine-Waal University of Applied Sciences for the Master of Science in Sustainable Development Management (2024), 2nd Supervisor

Clint Dahino: “Envisioning the future of ancestral domains in the Caraga Region, Philippines”, submitted to the University of Bonn for the Master of Sciences and Resource Management in the Tropics and Subtropics (2023), 1st Supervisor

Chomsiri Toyingtrakoon: “Factors Influencing Adoption of the Organic Rice Practices: A case study in Chiang Mai Province Thailand”, submitted to the University of Bonn for the Master of Sciences and Resource Management in the Tropics and Subtropics (2023), 1st Supervisor

Mirna Asnur: “Impact Evaluation of Community-based Forestry in Aceh, Indonesia: Local Knowledge and Institutional Strengthening” submitted to the University of Bonn for the Master of Sciences and Resource Management in the Tropics and Subtropics (2023), 1st Supervisor

Shahrear Roman: “Modeling the Suitability of Profitable Diversified Maize Production in Africa Under Different Socio-Economic and Climatic Conditions” submitted to the University of Bonn for the Master of Science Agricultural Food Economics (2023), 1st Supervisor

Ines Jendritzki: “Global Risk of Emerging Social-Ecological Land Use Conflicts: A Modeling Approach” submitted to the Rhine-Waal University of Applied Sciences for the Master of Science in Sustainable Development Management (2022), 2nd Supervisor

Uyen Tran: “Modelling the suitability of future bioeconomic agricultural innovations” submitted to the University of Bonn for the Master of Science in Agricultural Sciences and Resource Management in the Tropics and Subtropics (2021), 1st Supervisor

Melaku Mathewos: “Assessment of the Effects of Fruits and Vegetables Use on Biodiversity Conservation in Multi-Story Cropping Systems in Yayu Biosphere Reserve, Southwestern Ethiopia” submitted to Jimma University, Ethiopia for the Master of Science in Natural Resource Management (2017), 2nd Supervisor

Mezgebu Senbeto Duguma: “Trends, Practices and Ecosystem Services of major Farming Systems in Yayu Biosphere Reserve, Southwestern Ethiopia” submitted to Jimma University, Ethiopia for the Master of Science in Natural Resource Management (2017), 2nd Supervisor

Josefine Hühnert: “Development of a Risk Indicator Database and Potential Risk Analyses for Nature Conservation Projects” submitted to the University for Sustainable Development Eberswalde, Germany for the Master of Forest Information Technology (2015), 2nd Supervisor

Jeanette Blumröder: “Thermodynamic efficiency of forest ecosystems in Brandenburg – Development of an Index” submitted to the University for Sustainable Development Eberswalde, Germany for the Master of Global Change Management (2012), 2nd Supervisor

Slaven Rupich: “Spatial Road Disturbance Index (SPROADI), a novel Tool for Conservation Planning” submitted to the University for Sustainable Development Eberswalde, Germany for the Bachelor in International Forest Ecosystem Management (2012), 2nd Supervisor