

Curriculum vitae

Dr. Simone Cesarz

Contact details

Current position	Head of Laboratory at Experimental Interaction Ecology, iDiv, permanent contract
Affiliation	¹ German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Puschstr. 4, 04103 Leipzig, Germany ² Institute of Biology, Leipzig University, Leipzig, Germany
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Google Scholar	https://scholar.google.de/citations?user=j9S3tawAAAAJ&hl=de

Profile

I am an experimental soil ecologist with broad expertise in biodiversity–ecosystem functioning research, particularly above–belowground linkages, soil food webs (nematodes, microbes, earthworms), and global change drivers. I head the laboratory of the iDiv working group "Experimental Interaction Ecology" and coordinate experimental, field-, and laboratory-based investigations into how species diversity, community composition, and environmental change shape soil processes and ecosystem functions.

In addition, I am strongly committed to fostering a positive and respectful working environment and to promoting good scientific practice. This includes organizing and facilitating workshops on topics such as supervision, harassment prevention, and publication pressure. I also take on active roles within the iDiv community, serving on the DEI Committee, the iDiv Council in the past, and the iDiv Lab Meeting Group. Beyond formal responsibilities, I enjoy contributing to our working group's culture and cohesion—for example, by bringing music (karaoke), creativity, and humor to our PhD celebrations through cover songs, games, and "footprints," maintaining traditions such as the EIE soundtrack for departing members, and supporting our beloved iDidit Award for "unfortunate combinations of people and circumstances," a lighthearted reminder to embrace learning from mistakes.

Skills & Core Competencies

- Design and implementation of biodiversity and global change experiments, especially in grassland and forest ecosystems
- Soil biological methods: nematode extraction, microbial biomass & activity assays (FAME/PLFA, enzyme assays), earthworm community assessment
- Statistical/data-analytical expertise: community ecology, food-web metrics, multivariate statistics, structural equation modelling
- Field & laboratory supervision: coordinating technical staff, supervising BSc/MSc/PhD projects, teaching experimental work

Scientific Career

05/2014 - present

Head of Laboratory at Leipzig University, iDiv

Experimental Interaction Ecology, Prof. Dr. Nico Eisenhauer

Main research topics:

- Soil ecology
- BEF research
- Above-below ground interactions
- Global Change Ecology
- Nematode ecology
- Soil functions (microbial respiration and biomass, enzyme activity, water-stable aggregates)
- Microclimate

01/2013 – 04/2014	Head of Laboratory at Friedrich-Schiller-Universität Jena Aboveground-belowground interactions, Prof. Dr. Nico Eisenhauer
05/2008 – 04/2012	Ph.D. at the Georg-August-Universität Göttingen PhD thesis: "Plant species and global change agents as driving factors of rhizosphere processes and soil nematode communities" Supervisor: Prof. Dr. Stefan Scheu
10/2001 – 06/2007	Study of Biology at the Georg-August-Universität Göttingen Diploma thesis: "The effect of tree diversity on earthworms in a deciduous forest: Community composition the effect of soil and litter quality" Supervisor: Prof. Dr. Matthias Schaefer

Third-party funding

Funding phase	DFG programme Title	€
since 2024 (4 years)	<u>Jena-Experiment</u> (SP07) Research Unit Biotic interactions, community assembly, and eco-evolutionary dynamics as drivers of long-term biodiversity–ecosystem functioning relationships (FOR5000) <i>together with Nico Eisenhauer, Cordula Vogel</i>	10,698
since 2023 (4 years)	<u>PhytOakmeter</u> (SP7) Research Unit Using clonal oak phytometers to unravel acclimation and adaptation mechanisms of long-lived forest tree holobionts to ecological variations and climate change (FOR5571) <i>together with Nico Eisenhauer, Stephanie Jurburg</i>	203,550
since 2022 (4 years)	<u>BETA-FOR</u> (SP4) Research Unit Enhancing the structural diversity between patches for improving multidiversity and multifunctionality in production forests (FOR5375) <i>together with Nico Eisenhauer</i>	291,810
since 2018 (2 x 4.5 years)	<u>TreeDi</u> (PG8) International Research Training Group TreeDiversity Interactions: The role of tree-tree interactions in local neighbourhoods in Chinese subtropical forests (GRK2324) <i>together with Nico Eisenhauer</i>	486,540

Supervision of Researchers in Early Career Phases

Finalized PhD theses:

2. 2016- 2022	<u>Felix Gottschall</u> : Tree diversity effects on the spatial and temporal variability of belowground processes <i>with Nico Eisenhauer</i>
1. 2018 – 2021	<u>Rémy Beugnon</u> : Functional diversity of soil organisms, In: Tree Diversity Interactions: The role of tree-tree interactions in local neighbourhoods in Chinese subtropical forests <i>with Nico Eisenhauer</i>

Ongoing PhD theses:

6. 2024 -	<u>Tobias Kocks</u> : Microclimate-mediated tree diversity effects on soil functions <i>with Nico Eisenhauer</i>
5. 2024 -	<u>Zarah Janda</u> : Plant diversity effects on soil multistability <i>with Nico Eisenhauer</i>
4. 2024 -	<u>Lu Wang</u> : The role of tree-nematode interactions in the acclimation and

adaptation of trees – molecular diversity
with Steph Jurburg & Nico Eisenhauer

3. 2024 -

April Leonar: The role of tree-nematode interactions in the acclimation and adaptation of trees – soil food webs and ecosystem functioning
with Steph Jurburg & Nico Eisenhauer

2. 2022 -

Rike Schwarz: Effects of forest spatial heterogeneity on soil biodiversity and functioning
with Nico Eisenhauer

1. 2021 -

Henriette Christel: Tree diversity effects on belowground functions depend on the scale
with Nico Eisenhauer

Finalized Master's theses:

12. 2024 - 2025

Sophie Horbach: Plant diversity effects on seasonal soil multistability
with Zarah Janda & Nico Eisenhauer

11. 2024 - 2025

Nina Weide: Effects of plant species richness on ecosystem resistance and recovery to drought: Insights from a microcosm experiment
with Zarah Janda & Nico Eisenhauer

10. 2023 - 2024

Emily Schwarz: The effect of earthworm invasion in North American forests on the nematode community
with Malte Jochum

9. 2023

Anne Peter: Metabolic fingerprints of microbial communities under different conditions using MicroResp™

8. 2023

Anne Busch: Enhancing structural beta complexity (ESBC) in production forests affects activity response of microbial soil communities to a variety of substrates
with Rike Schwarz & Nico Eisenhauer

7. 2020 - 2023

Maike Ziegler: Temporal dynamics of soil microbial communities during urban forest restoration in New Zealand
with Andrew Barnes & Nico Eisenhauer

6. 2022

Linda Kunze: Effects of two temperate tree species on microbiological and physical soil properties across an experimental tree diversity gradient

5. 2020 – 2021

Henriette Christel: Tree species identity and tree-tree interaction effects on soil microbial biomass and basal respiration
with Rémy Beugnon & Nico Eisenhauer

4. 2018 – 2019

Julia Kostin: Land use and climate change effects on the stability of soil functions
with Nico Eisenhauer

3. 2015 - 2016

Katharina Stolze: Einfluss von anözischen Regenwürmern auf mikrobielle Gemeinschaften in der Drilosphäre und hydrophobe Eigenschaften der Gangwände
with Nico Eisenhauer

2. 2013 – 2015

Susan Pabst: The effect of elevated CO₂ and temperature on soil biota and the success of native vs invasive plants
with Jes Hines & Nico Eisenhauer

1. 2013 – 2015

Daniela Wagner: Does plant diversity buffer effects of flooding on soil nematode communities?
with Nico Eisenhauer

Ongoing Master's theses:

1. 2024 -

Luisa Rübener: First soil ecological insights into human composting: Pilot study using a pig

Finalized bachelor's theses:

13. 2023

Johannes Meister: The effect of different soil treatments on soil basal respiration and biomass

12. 2021

Luisa Rübener: Decomposition in the Gondwanaland

11. 2019 – 2020 *Anne Peter*: Review of the MicroResp™ method and revising the substrate set to obtain high discriminatory power among different environmental contexts
10. 2019 *Selina Mehner*: Bodenqualitäts- und Klimaeffekte auf Bodenökosystemfunktionen – Entzerrung mit Hilfe eines Phytometers with Nico Eisenhauer
9. 2019 *Sabine Fürst*: Drivers of soil microbial biomass across global drylands with Nico Eisenhauer
8. 2019 *Friderike Wölke*: Determinants of Microbial Respiration and Biomass across Global Drylands with Nico Eisenhauer
7. 2017 – 2018 *Till Enrique Newiger-Dous*: Effects of tree diversity on decomposition and microbial functions with Felix Gottschall & Nico Eisenhauer
6. 2017-2018 *Sophie Davids*: Effects of tree diversity on leaf litter decomposition and microbial functions with Felix Gottschall & Nico Eisenhauer
5. 2017 *Karl Andraczek*: Der Einfluss der Baumhöhe auf die Dichte und Zusammensetzung von Nematoden in den Baumkronen von Eichen und Eschen des Leipziger Auwaldes
4. 2014 *Annika Eva Schulz*: Comparing different nematode extraction techniques
3. 2013 *Benjamin Schwarz*: Tree diversity and identity effects on earthworm communities with Nico Eisenhauer
2. 2014 *Nicolas Philip Betsche*: Side effects of mustard solution for earthworm extraction on plant competition with Nico Eisenhauer
1. 2013 *Kristin Wagner*: Effizienz verschiedener Regenwurmextraktionsmethoden with Nico Eisenhauer

Publications

87. Lettenmaier et al (2025) Light and ungulate browsing interact in shaping future woody plant diversity through natural regeneration. *Journal of Applied Ecology*. Accepted
86. Yi H et al (2025) Tree diversity increases the diversity of soil nematodes and the density of persisters in a temperate forest experiment. *European Journal of Soil Science*. Accepted.
85. Mani DTC, Mulder VL, Vazquez Martin C, Geisen S, Campos-Herrera R, Čerevková A, Cesarz S, Ciobanu M, Costa SR, de Goede R, Eisenhauer N, Jackson L, Kalinkina DS, Kudrin A, Matveeva EM, Mikola J, Mulder C, Nagy P, Njezic B, Palomares-Rius JE, Peneva V, Popovici I, Ruess L, Sánchez-Moreno S, Sünemann M, Sushchuk AA, Vestergård M, Villenave C, Waeyenberge L, Wallinga J, Creamer R (2025) Drivers of the geographical distribution of nematode-based indices across Europe. *Applied Soil Ecology* 214: 106359. <https://doi.org/10.1016/j.apsoil.2025.106359>
84. van Galen et al (2025) A global database of soil microbial phospholipid fatty acids and enzyme activities. *Scientific Data*. Accepted.
83. Schwarz R, Eisenhauer N, Ammer C, Bradler PM, Decker O, Delory BM, Dietrich P, Fichtner A, Huang Y, Lettenmaier L, Junginger M, Mitesser O, Müller J, Von Oheimb G, Pierick K, Scherer-Lorenzen M, Cesarz S* (2025) Inconsistent short-term effects of enhanced structural complexity on soil microbial properties across German forests. *Applied Soil Ecology* 214: 106335. <https://doi.org/10.1016/j.apsoil.2025.106335>
82. Beugnon R, Eisenhauer N, Lochner A, Blechinger MJ, Buhr PE, Cesarz S, Farfan MA, Ferlian O, Rumpeltien Howard AJ, Huang Y, Kuhlmann BS, Lienicke N, Möhlmann S, Nowka A, Petereit E, Ristok C, Schädler M, Schmid JTM, Schulte LJ, Seim K-L, Thouvenot L, Tremmel R, Weber L, Weitowitz J, Yi H, Sünemann M (2025) Sustainable Land Use Enhances Soil Microbial Respiration Responses to Experimental Heat Stress. *Global Change Biology* 31: e70214. <https://doi.org/10.1111/gcb.70214>
81. Schnabel F, Guillemot J, Barry KE, Brunn M, Cesarz S, Eisenhauer N, Gebauer T, Guerrero-Ramirez NR,

Handa IT, Madsen C, Mancilla, Lady, Monteza J, Moore T, Oelmann Y, Scherer-Lorenzen M, Schwendenmann L, Wagner A, Wirth C, Potvin C (2025) Tree Diversity Increases Carbon Stocks and Fluxes Above—But Not Belowground in a Tropical Forest Experiment. *Global Change Biology* 31: e70089. <https://doi.org/10.1111/gcb.70089>

80. Schnabel F, Beugnon R, Yang B, Richter R, Eisenhauer N, Huang Y, Liu X, Wirth C, Cesarz S, Fichtner A, Perles-García M, Hähn G, Härdtle W, Kunz M, Castro Izaguirre N, Niklaus P, von Oheimb G, Schmid B, Trogisch S, Wendisch M, Ma K, Bruehlheide H (2025) Tree diversity increases forest temperature buffering via enhancing canopy density and structural diversity. *Ecology Letters* 28: e70096. <https://doi.org/10.1111/ele.70096>
79. Haq HU, Hauer A, Singavarapu B, Christel H, Cesarz S, Eisenhauer N, Ferlian O, Bruehlheide H, Wubet T (2025) The interactive effect of tree mycorrhizal type, mycorrhizal type mixture and tree diversity shapes rooting zone soil fungal communities in temperate forest ecosystems. *Functional Ecology* 39: 1441–1454. <https://doi.org/10.1111/1365-2435.14651>

2024

78. Hutengs C, Eisenhauer N, Schädler M, Cesarz S, Lochner A, Seidel M, Vohland M (2024) Enhanced VNIR and MIR proximal sensing of soil organic matter and PLFA-derived soil microbial properties through machine learning ensembles and external parameter orthogonalization. *Geoderma* 450: 117037. <https://doi.org/10.1016/j.geoderma.2024.117037>
77. Christel H, Bruehlheide H, Cesarz S, Eisenhauer N, Hähn GJA, Beugnon R (2024) The spatial distribution of tree–tree interaction effects on soil microbial biomass and respiration. *Ecology and Evolution* 14: e11530. <https://doi.org/10.1002/ece3.11530>
76. Guo L, Chang P, Deng M, Yang S, Yang L, Peng Z, Beugnon R, Saadani M, Wang Z, Jia Z, Wang B, Liu C, Cesarz S, Eisenhauer N, Bruehlheide H, Liu L (2024) Tree species diversity modulates the effects of fungal pathogens on litter decomposition: evidences from an incubation experiment. *Plant and Soil*. <https://doi.org/10.1007/s11104-024-06780-x>
75. Eisenhauer N, Vogel C, Domeignoz Horta LA, Bonato Asato A, Janda Z, Cesarz S* (2024) Plant diversity effects on soil multistability. *Research Ideas and Outcomes* 10: e127123. <https://doi.org/10.3897/rio.10.e127123>
74. Eldridge DJ, Ding J, Dorrough J, Delgado-Baquerizo M, Sala O, Gross N, Le Bagousse-Pinguet Y, Mallen-Cooper M, Saiz H, Asensio S, Ochoa V, Gozalo B, Guirado E, García-Gómez M, Valencia E, Martínez-Valderrama J, Plaza C, Abedi M, Ahmadian N, Ahumada RJ, Alcántara JM, Amghar F, Azevedo L, Ben Salem F, Berdugo M, Blaum N, Boldgiv B, Bowker M, Bran D, Bu C, Canessa R, Castillo-Monroy AP, Castro I, Castro-Quezada P, Cesarz S, Chibani R, Conceição AA, Darrouzet-Nardi A, Davila YC, Deák B, Díaz-Martínez P, Donoso DA, Dougill AD, Durán J, Eisenhauer N, Ejtehadi H, Espinosa CI, Fajardo A, Farzam M, Foronda A, Franzese J, Fraser LH, Gaitán J, Geissler K, Gonzalez SL, Gusman-Montalvan E, Hernández RM, Hölzel N, Hughes FM, Jadan O, Jentsch A, Ju M, Kaseke KF, Köbel M, Lehmann A, Liancourt P, Linstädter A, Louw MA, Ma Q, Mabaso M, Maggs-Kölling G, Makhalanyane TP, Issa OM, Marais E, McClaran M, Mendoza B, Mokoka V, Mora JP, Moreno G, Munson S, Nunes A, Oliva G, Oñativia GR, Osborne B, Peter G, Pierre M, Pueyo Y, Emiliano Quiroga R, Reed S, Rey A, Rey P, Gómez VMR, Rolo V, Rillig MC, Le Roux PC, Ruppert JC, Salah A, Sebei PJ, Sharkhuu A, Stavi I, Stephens C, Teixido AL, Thomas AD, Tielbörger K, Robles ST, Travers S, Valkó O, Van Den Brink L, Velbert F, Von Heßberg A, Wamiti W, Wang D, Wang L, Wardle GM, Yahdjian L, Zaady E, Zhang Y, Zhou X, Maestre FT (2024) Hotspots of biogeochemical activity linked to aridity and plant traits across global drylands. *Nature Plants* 10: 760–770. <https://doi.org/10.1038/s41477-024-01670-7>
73. Singavarapu B, UlHaq H, Darnstaedt F, Nawaz A, Beugnon R, Cesarz S, Eisenhauer N, Du J, Xue K, Wang Y, Bruehlheide H, Wubet T (2024) Dissecting the Effects of Tree Mycorrhizal Type, Ecology, and Phylogeny on Forest Root Mycobiomes. *New Phytologist* 242:1691–1703. <https://doi.org/10.1111/nph.19722>
72. Patoine G, Eisenhauer N, Cesarz S, Phillips HRP, Xu X, Zhang L, Guerra CA (2024) Reply to: Field experiments show no consistent reductions in soil microbial carbon in response to warming. *Nature Communications* 15:1732 <https://doi.org/10.1038/s41467-024-45509-3>

2023

71. Sünemann M, Beugnon R, Breitzkreuz C, Buscot F, Cesarz S, Jones A, Lehmann A, Lochner A, Orgiazzi A, Reitz T, Rillig MC, Schädler M, Smith LC, Zeuner A, Guerra CA, Eisenhauer N (2023) Climate change

70. Ray T, Delory BM, Beugnon R, Bruehlheide H, Cesarz S, Eisenhauer N, Ferlian O, Quosh J, von Oheimb G, Fichtner A (2023) Tree diversity increases productivity through enhancing structural complexity across mycorrhizal types. *Science Advances* 9, eadi2362. <https://doi.org/10.1126/sciadv.adi2362>
69. Cesarz S, Eisenhauer N, Bucher SF, Ciobanu M, Hines H (2023) Artificial light at night (ALAN) causes shifts in soil communities and functions. *Philosophical Transactions B* 378: 20220366. <https://doi.org/10.1098/rstb.2022.0366>
68. Dyer A, Ryser R, Brose U, Amyntas A, Bodnar N, Boy T, Bucher SF, Cesarz S, Eisenhauer E, Gebler A, Hines J, Kyba CCM, Menz MHM, Rackwitz K, Shatwell T, Terlau JF, Hirt M (2023) Insect communities under the influence of skyglow: diffuse night-time illuminance induces spatiotemporal shifts in movement and predation. *Philosophical Transactions B* 78: 20220359 <https://doi.org/10.1098/rstb.2022.0359>
67. Bucher SF, Uhde L, Weigelt A, Cesarz S, Eisenhauer N, Gebler A, Kyba C, Römermann C, Shatwell T, Hines J (2023) Artificial light at night (ALAN) decreases plant diversity and performance in experimental grassland communities. *Philosophical Transactions B* 378: 20220358. <https://doi.org/10.1098/rstb.2022.0358>
- PREPRINT Schnabel F, Beugnon R, Yang B, Richter R, Eisenhauer N, Huang Y, Liu X, Wirth C, Cesarz S, Fichtner A, Perles-Garcia MD, Hähn GJA, Härdtle W, Kunz M, Castro Izaguirre NC, Niklaus PA, von Oheimb G, Schmid B, Trogisch S, Wendisch M, Ma K, Bruehlheide H (2023) Tree diversity increases forest temperature buffering. *bioRxiv*: 2023.09.11.556807. <https://doi.org/10.1101/2023.09.11.556807>
66. Beugnon R, Eisenhauer N, Bruehlheide H, Davrinche A, Du J, Haider S, Hähn G, Saadani M, Singavarapu B, Sünemann M, Thouvenot L, Wang Y, Wubet T, Xue K, Cesarz S* (2023) Tree diversity effects on litter decomposition are mediated by litterfall and microbial processes. *Oikos*.<https://doi.org/10.1111/oik.09751>
65. Eisenhauer N, Angst G, Asato AEB, Beugnon R, Bönisch E, Cesarz S, Dietrich P, Jurburg SD, Madaj A-M, Reuben RC, Ristok C, Sünemann M, Yi H, Guerra CA, Hines J (2023) The heterogeneity-diversity-system performance nexus. *National Science Review* 10: nwad109, <https://doi.org/10.1093/nsr/nwad109>.
64. Singavarapu B, Du J, Beugnon R, Cesarz S, Eisenhauer N, Xue K, Wang Y, Bruehlheide H, Wubet T (2023) Functional Potential of Soil Microbial Communities and Their Subcommunities Varies with Tree Mycorrhizal Type and Tree Diversity. *Microbiology Spectrum* 11: e04578-22. <https://doi.org/10.1128/spectrum.04578-22>
63. Müller J, Mitesser O, Cadotte MW, van der Plas F, Mori AS, Ammer C, Chao A, Scherer-Lorenzen M, Baldrian P, Bässler C, Biedermann P, Cesarz S, Claßen A, Delory BM, Feldhaar H, Fichtner A, Hothorn T, Kuenzer C, Peters MK, Pierick K, Schmitt T, Schuldt B, Seidel D, Six D, Steffan-Dewenter I, Thorn S, von Oheimb G, Wegmann M, Weisser WW, Eisenhauer N (2023) Enhancing the structural diversity between forest patches—A concept and real-world experiment to study biodiversity, multifunctionality and forest resilience across spatial scales. *Global Change Biology* 29: 1437–1450. <https://doi.org/10.1111/gcb.16564>

2022

62. Beugnon R, Bu W, Bruehlheide H, Davrinche A, Du J, Haider S, Kunz M, von Oheimb G, Perles-Garcia MD, Saadani M, Scholten T, Seitz S, Singavarapu B, Trogisch S, Wang Y, Wubet T, Xue K, Yang B, Cesarz S**, Eisenhauer N (2022) Abiotic and biotic drivers of tree trait effects on soil microbial biomass and soil carbon concentration. *Ecological Monographs* 93: e1563. <https://doi.org/10.1002/ecm.1563>
61. Gottschall F, Cesarz S**, Auge H, Kovach KR, Nock CA, Eisenhauer N (2022) Tree community composition stabilizes ecosystem functions in response to drought. *Ecosphere* 14: e4486. <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.4486>
60. Maestre FT, Bagousse-Pinguet YL, Delgado-Baquerizo M, Eldridge DJ, Saiz H, Berdugo M, Gozalo B, Ochoa V, Guirado E, García-Gómez M, Valencia E, Gaitán JJ, Asensio S, Mendoza BJ, Plaza C, Díaz-Martínez P, Rey A, Hu H-W, He J-Z, Wang J-T, Lehmann A, Rillig MC, Cesarz S, Eisenhauer N, Martínez-Valderrama J, Moreno-Jiménez E, Sala O, Abedi M, Ahmadian N, Alados CL, Aramayo V, Amghar F, Arredondo T, Ahumada RJ, Bahalkheh K, Salem FB, Blaum N, Boldgiv B, Bowker MA, Bran D, Bu C, Canessa R, Castillo-Monroy AP, Castro H, Castro I, Castro-Quezada P, Chibani R, Conceição AA, Currier CM, Darrouzet-Nardi A, Deák B, Donoso DA, Dougill AJ, Durán J,

- Erdenetsetseg B, Espinosa CI, Fajardo A, Farzam M, Ferrante D, Frank ASK, Fraser LH, Gherardi LA, Greenville AC, Guerra CA, Guzmán-Montalvan E, Hernández-Hernández RM, Hölzel N, Huber-Sannwald E, Hughes FM, Jadán-Maza O, Jeltsch F, Jentsch A, Kaseke KF, Köbel M, Koopman JE, Leder CV, Linstädter A, Liu J, Louw MA, Maggs-Kölling G, Makhalanyane TP, Issa OM, Manzaneda AJ, Marais E, Mora JP, Moreno G, Munson SM, Nunes A, Oliva G, Oñatibia GR, Peter G, Pivari MOD, Pueyo Y, Quiroga RE, Rahmanian S, Reed SC, Rey PJ, Richard B, Rodríguez A, Rolo V, Rubalcaba JG, Ruppert JC, Salah A, Schuchardt MA, Spann S, Stavi I, Stephens CRA, Swemmer AM, Teixido AL, Thomas AD, Throop HL, Tielbörger K, Travers S, Val J, Valkó O, Wamiti W, Wang D, Wang L, Wardle GM, Yahdjian L, Zaady E, Zhang Y, Zhou X, Singh BK, Gross N (2022). Grazing and ecosystem service delivery in global drylands. *Science* 378: 915–920. <https://doi.org/DOI: 10.1126/science.abq40691>
59. Antunes AC, Gauzens B, Brose U, Potapov AM, Jochum M, Santini L, Eisenhauer N, Ferlian O, Cesarz S, Scheu S, Hirt MR. (2022). Environmental drivers of local abundance–mass scaling in soil animal communities. *Oikos* 2023: e09735. <https://doi.org/10.1111/oik.09735>
58. Patoine G, Eisenhauer N, Cesarz S, Phillips H, Xu X, Zhang L, Guerra CA (2022) Drivers and trends of global soil microbial carbon over two decades. *Nature Communications* 13: 4195. <https://www.nature.com/articles/s41467-022-31833-z>
57. Sasaki T, Ishii N, Makishima D, Sutoh R, Goto A, Kawai Y, Taniguchi H, Okano K, Matsuo A, Lochner A, Cesarz S, Suyama Y, Hikosaka K, Eisenhauer N (2022) Plant and microbial community composition jointly determine moorland multifunctionality. *Journal of Ecology* 110: 2507–2521. <https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2745.13969>
56. Ferlian O, Cesarz S, Lochner A, Potapov A, Thouvenot L, Eisenhauer N (2022) Earthworm invasion shifts trophic niches of ground-dwelling invertebrates in a North American forest. *Soil Biology and Biochemistry* 171, 108730. <https://doi.org/10.1016/j.soilbio.2022.108730>
55. Cesarz S, Craven D, Auge H, Bruehlheide H, Castagneyrol, Gutknecht J, Hector A, Jactel H, Koricheva J, Messier C, Muys B, O'Brien M, Paquette A, Ponette Q, Potvin C, Reich PB, Scherer-Lorenzen M, Smith AR, Verheyen K, Eisenhauer N (2022) Tree diversity effects on soil microbial biomass and respiration are context dependent across forest diversity experiments (2022). *Global Ecology and Biogeography* 31:872–885. <http://doi.org/10.1111/geb.13461>
54. Lembrechts JJ, ..., Cesarz S, ... , Lenoir J (2022) Global maps of soil temperature. *Global Change Biology* 28: 3110–3144. <https://onlinelibrary.wiley.com/doi/10.1111/gcb.16060>.
53. Mielke L, Taubert M, Cesarz S, Ruess L, Küsel K, Gleixner B, G, Lange M (2022) Nematode grazing increases the allocation of plant-derived carbon to soil bacteria and saprophytic fungi, and activates bacterial species of the rhizosphere. *Pedobiologia* 90, 150787. <https://doi.org/10.1016/j.pedobi.2021.150787>
- 2021**
52. Liu M, Cesarz S, Eisenhauer N, Xia H, Fu S, Dylan C (2021) Soil quality, leaf litter quality, and microbial biomass interactively drive soil respiration in a microcosm experiment. *SOIL ORGANISMS* 93:181–194. <https://doi.org/10.25674/so93iss3id158>
51. Beugnon R, Ladouceur E, Sünnemann M, Cesarz S, Eisenhauer N (2021) Diverse forests are cool: Promoting diverse forests to mitigate carbon emissions and climate change. *Journal of Sustainable Agriculture and Environment* 1:5–8. <http://doi.org/10.1002/sae2.12005>
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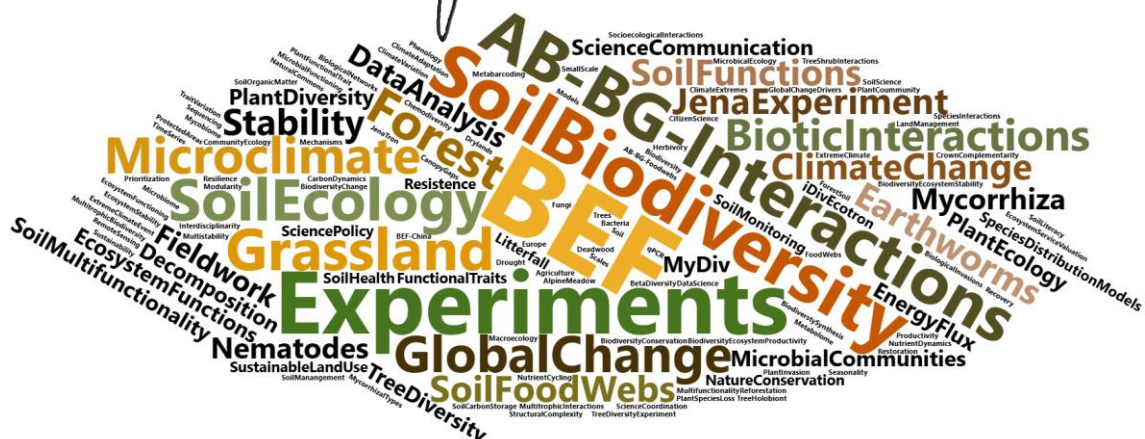
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Leipzig, October 28th, 2025



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