

#### AG1: Role of IPM-based biodiversity measures in agricultural landscape transformation

AG1-P1 - Development of an artificial nesting system for the potential biocontrol agent *Pempherdon lethifer* (Hymenoptera: Crabronidae)

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AG1-P2 - ConservES – Conserving biodiversity and maximising ecosystem services in Europe's agricultural landscapes

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#### AG2: Above- and belowground structures and traits of agroforestry systems: chances and trade-offs

AG2-P1 - Unfolding the leaf economics spectrum for wheat: trait analysis and genomic associations across cultivars

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AG2-P2 - Agroforestry practices in sustainable land use systems in Ghana

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AG2-P3 - Tree species diversity favours early shade tree survival in an agroforestry experiment in north-eastern Madagascar

Yevgeniya Korol<sup>1</sup>, Thio Rosin Fulgence<sup>2</sup>, Christophe Manjaribe<sup>2</sup>, Rindrasoa Rajaonarimalala<sup>1</sup>, Holger Kreft<sup>3,4</sup>, Dirk Hölscher<sup>1,3</sup>

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AG2-P4 - Towards Meeting Sustainable Biodiversity: Evidence from Cocoa Agroforestry System in Ghana

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AG3: Ecological and social dimensions of future renewable energy systems

**AG3-P1 - A meta-analysis on displacement effects of wind turbines on animals**

Anna Duke<sup>1</sup>, Jasper Gercken<sup>1</sup>, Carsten Dormann<sup>2</sup>, Alexandra-Maria Klein<sup>1</sup>, Anne-Christine Mupepele<sup>3</sup>, Finn Rehling<sup>1</sup>

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**AG3-P2 - Environmental Impacts of Floating-PV**

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CM1: Bringing together theory and data to understand ecological communities

**CM1-P1 - Effect of changing interactions in pollinator persistence**

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CM2 The future of bio- and eco-acoustic monitoring across scales and ecosystems: Methods, challenges and applications

**CM2-P1 - Advancing biodiversity monitoring through automated stations: a European pilot study**

Jarek Scanferla<sup>1</sup>, Andreas Hilpold<sup>1</sup>, Ulrike Tappeiner<sup>1,3</sup>, Giordano Brambilla<sup>1</sup>, Anna Elisa Marchetti<sup>1,2</sup>, Matteo Anderle<sup>1</sup>

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**CM2-P2 - By-species Classification Performance of BirdNET: Effects of Bird Morphology, Acoustic Traits, and Habitat**

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**CM2-P3 - PaludiZentrale: Implementing a bioacoustic monitoring for long-term biodiversity assessment in paludiculture projects**

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**CM2-P4 - Aggregated time-series features boost species-specific differentiation of true and false positives in passive acoustic monitoring of bird assemblages**

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**CM2-P5 - Soundscapes across cityscapes: linking songbird biodiversity to urban soundscapes and local vegetation structures.**

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**CM3: Advancing ecology with deep learning**

**CM3-P1 - Building an open atlas of knowledge for invasion science and beyond: key results of the enKORE project in the Hi Knowledge initiative**

Tina Heger<sup>1,2,3</sup>, Maud Bernard-Verdier<sup>1,2</sup>, Christopher Kittel<sup>4</sup>, Peter Kraker<sup>4</sup>, Daniel Mietchen<sup>1,2,5,6</sup>, Camille Musseau<sup>1,2</sup>, Maxi Schramm<sup>4</sup>, Steph Tyszka<sup>1,2</sup>, Jonathan M. Jeschke<sup>1,2</sup>

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**CM3-P2 - A Window to the Past – The use of archive data for collecting baseline information on biodiversity**

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**CM3-P3 - A digital twin for biological field research: Modelling tidal marsh ecosystem dynamics in response to climate change**

Dirk Grane<sup>1</sup>, Julian Mittmann-Goetsch<sup>1</sup>, Hauke Volquardsen<sup>2</sup>, Maximilian Taube<sup>2</sup>, Soner Bilibay<sup>2</sup>, Katrin Schöning-Stierand<sup>2</sup>, Martin Semmann<sup>2</sup>, Kai Jensen<sup>1</sup>

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**CM3-P4 - Training and interpreting deep neural networks with the cito R package**

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**CM3-P5 - Training and assessment of spatial prediction models: challenges, conceptual frameworks and implemented strategies in the R package CAST**

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**CM4 Can good modelling practices foster sustainable land management?**

**CM4-P1 - Project WATARA-MODE: A model for the cost-benefit analysis of management options for controlling new plant pests**

Kerstin Günther<sup>1</sup>, Bastian Heß<sup>1</sup>, Jenny Jacobs<sup>1</sup>, Gritta Schrader<sup>1</sup>, Anne Wilstermann<sup>1</sup>

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**CM4-P2 - How suitable are the existing agent-based models to support the management of mangrove restoration?**

**- A review from the ontogenetic perspective of trees**

Mohammad Sagar Islam<sup>1</sup>, Anette Eltner<sup>3</sup>, Farid Dahdouh-Guebas<sup>2</sup>, Uday Pimple<sup>4</sup>, Ronny Peters<sup>1</sup>, Marie-Christin Wimmerl<sup>1</sup>, Uta Berger<sup>1</sup>

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**CM4-P3 - Towards a more biodiversity aware agriculture - a Biodiversity Potential Index for crops**

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## EE1: Pollinators and pollination services under global change

### **EE1-P1 - The bare necessities of a ground nesting bee species**

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### **EE1-P2 - The influence of boron supply on oilseed rape pollination and yield**

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### **EE1-P3 - A generalized model reveals the effect of nestedness, connectance and network size on the stability of plant-pollinator interaction networks**

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### **EE1-P4 - Limestone quarries as secondary habitats: Interactive effects of landscape and local habitat characteristics on trap-nesting wild bee communities.**

Ricarda Koch<sup>1</sup>, Felix Kirsch<sup>1,2</sup>, Paula-Johanna Smely<sup>1</sup>, Annika Hass<sup>1</sup>, Catrin Westphal<sup>1</sup>

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### **EE1-P5 - Effect of the antiparasitic moxidectin on non-target organisms**

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## **EE1-P6 - Effects of land-use change on pollinator species and functional diversity in Eastern Europe - Romania**

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## **EE1-P7 - Effects of overwintering conditions and early spring on potential bee-plant asynchronies of wild bees**

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## **EE1-P8 - The effect of floral plantings on the emergence of the crop pollination service**

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## **EE1-P9 - Allometry and functional diversity of Meliponini (Apidae: Apinae) along a forest recovery gradient in a South American tropical lowland rainforest**

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## **EE1-P10 - Deciphering the influence of hedges on the habitat suitability of ground-nesting bees**

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## **EE1-P11 - Spatial and temporal effects of mass-flowering crops on the abundance and richness of pollinators in agricultural landscapes**

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## **EE2: Manipulation and control - the experimental foundation of global change research**

### **EE2-P1 - Climate-driven shifts in plant-soil feedback of a perennial grass species**

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## **EE2-P2 - Getting to the root of 21<sup>st</sup> century allocation changes**

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## **EE3: Understanding and safeguarding wetland functioning and ecological networks**

### **EE3-P1 - New insights into the habitat preferences of *Liparis loeselii* based on trait ecology**

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### **EE3-P2 - Benthic macroinvertebrate food web structures in ponds and ditches**

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### **EE3-P3 - Effect of floods on spider community in a floodplain mesocosm**

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### **EE3-P4 - Development of reed canary grass on rewetted fen soil – agricultural and ecological insights on a potential fodder alternative.**

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### **EE3-P5 - Warming Effects on Soil Microbial Community Dynamics in Nordic Salt Marsh Ecosystems**

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### **EE3-P6 - Revealing hidden methane oxidation potential within wetland plant tissues**

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### EE3-P7 - Peat formation potential of *Typha* spp. on a paludiculture pilot site

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### EE3-P8 - Rice paddies can help amphibian populations in Swiss agricultural landscapes

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### EE4: Lighting up the landscape: Effects of artificial light at night on natural, agricultural and urban landscapes

#### EE4-P1 - Determining the reach of light pollution on arthropod communities: a campus case study

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### EE5: Biodiversity Exploratories (BE): the value of long-term research platforms in the real world-land-use, biodiversity, ecosystem processes and services

#### EE5-P1 - The impact of forest management intensity on multidiversity of deadwood-colonizing species in Central Europe

Daniel Rieker<sup>1,2</sup>, Francios Buscot<sup>1</sup>, Björn Hoppe<sup>3</sup>, Harald Kellner<sup>4</sup>, Claus Bässler<sup>5</sup>, Julia Moll<sup>1</sup>

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#### EE5-P2 - Influence of land use on mammal diversity and Lyme disease risk

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#### EE5-P3 - Effects of different land- use intensities on seed production of grassland species

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**EE5-P4 - Land use intensity effects on the biodiversity – ecosystem functioning relationship at the management unit scale in semi-natural grasslands**

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**EE5-P5 - BEyond- Learning from the Biodiversity Exploratories to make predictions beyond them**

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**EE5-P6 - ExploreNiche: using the oxygen stable isotopes approach to determine belowground niche partitioning in grasslands**

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**EE5-P7 - Exploring the impact of soil silicon and calcium on plant functional types and community composition**

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**EE5-P8 - Species interactions play a weak destabilizing role in biodiversity experiments: An integrated methodological framework for variability**

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**EE5-P9 - Community benefits - publicly available data and the options to request it**

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EE6: Beta diversity and beta ecosystem functioning: Landscape homogenization, new indices and the potential for beta BEF research

EE6-P1 - Mapping spatial patterns of community assembly processes across multiple taxa reveals hotspots of trait filtering

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EE6-P2 - Increasing intraspecific plant chemical diversity at plot and plant level affects herbivorous, predatory, and pollinating arthropod communities

*Lina Ojeda-Prieto, Eliecer L. Moreno, Robin Heinen, Wolfgang W. Weisser*

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EE6-P3 - Carabid beetle communities exhibit distinct composition along rivers

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EE6-P4 - Effect of *tenacetum vulgare* (tansy) chemo-diversity on ant aphid mutualisms

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EE6-P5 - Human pressure homogenises species and traits globally

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EE6-P6 - Beta diversity at boundaries higher than in patch interiors

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## FE1: Reconciling forest conservation, forest protection and forest management in the climate crisis

### **FE1-P1 - The effects of deadwood on tree regeneration and microsites: a systematic review**

Florian Steinebrunner<sup>1,2</sup>, Thomas Medicus<sup>1,2</sup>, Dorothea Peter<sup>3</sup>, Alexander Tischer<sup>3,4</sup>, Markus Bernhardt-Römermann<sup>1,2</sup>

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### **FE1-P2 - Fire risks and boreal forest management**

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### **FE1-P3 - Mixed forests maintain ecosystem functions under drought**

Michela Audisio<sup>1</sup>, Christina Hackmann<sup>1</sup>, Jacob Schmidt<sup>2</sup>, Jing-Zhong Lu<sup>3</sup>, Pedro Mittelman<sup>4</sup>, Andrea Polle<sup>2</sup>, Niko Balkenhol<sup>4</sup>, Stefan Scheu<sup>3</sup>, Christian Ammer<sup>1</sup>

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### **FE1-P4 - A nationwide database on forest damage: challenges, opportunities and outlook**

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### **FE1-P5 - Can natural dynamics increase resilience and multifunctionality of floodplain forest ecosystems?**

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### **FE1-P6 - Mountain pine health and ecological consequences in a protected forest landscape**

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**FE1-P7 - Preventive measures: Limited impact of soil amendments to mitigate high mortality of replanted trees**

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**FE1-P8 - Regulating outbreaks of the European spruce bark beetle (*Ips typographus*): Economic and ecological implications for forest management**

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**FE1-P9 - Prediction of European spruce bark beetle mortality based on tree radial growth and response to past drought in mountain forests of south-eastern Switzerland**

*Concetta Lisella<sup>1,2</sup>, Franco Salvador<sup>2</sup>, Sophie Spelsberg<sup>2</sup>, Theresa Banzer<sup>2</sup>, Patrick Fonti<sup>6</sup>, Giovanni Santopuoli<sup>3</sup>, Pierdomenico Spina<sup>1</sup>, Roberto Tognetti<sup>4</sup>, Alessandra Botter<sup>2,5</sup>*

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**FE1-P10 - Global insights on insecticide use in forest systems: patterns, impacts and perspectives in a changing world**

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**FE2: Silviculture beyond the climax phase: Adaptation strategies for a dynamic forest management in times of change**

**FE2-P1 - Management as a driving factor of forest ecosystem vulnerability and resilience**

*Marco Baldo<sup>1</sup>, Agnish Kumar Das<sup>1</sup>, Katarína Merganičová<sup>1</sup>, Laura Dobor<sup>1</sup>, Lukáš Bílek<sup>1</sup>, Werner Rammer<sup>2</sup>, Rupert Seidl<sup>2</sup>, Tomáš Hlásny<sup>1</sup>*

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**FE2-P2 - Pioneering future forests: The Harz living laboratory as innovative approach for climate resilient management**

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**FE2-P3 - Linking climate and social changes for identifying adaption pathways in Alpine forests: stakeholder perspectives on Alpine Forest ecosystem-services**

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**FE2-P4 - Application of Climate-Smart Forestry in long-term experimental plots to analyze the management effects for forest resilience and climate adaptation**

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**FE2-P5 - Understanding forest dynamics under climate change: Insights from strict forest reserves in Bavaria**

Timo Pampuch<sup>1</sup>, Andreas Rothe<sup>1</sup>, Christian Zang<sup>1</sup>, Kirsten Krüger<sup>3</sup>, Markus Blaschke<sup>2</sup>, Samuel Egan<sup>1</sup>, Thomas Kudernatsch<sup>2</sup>, Jörg Ewald<sup>1</sup>

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**FE2-P6 - A framework to measure mountain forest resistance and resilience: Application of aerial images and field data**

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**FE2-P7 - Development of *Abies alba* seedlings during the years 2023 and 2024 in relation to microclimatic variables**

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## **FE2-P8 - Management of large-scale disturbances in the past as a historical guide for future silvicultural strategies**

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## **FE2-P9 - Effects of deadwood management strategies on topsoil functions in disturbed spruce areas in the Harz mountains**

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## **FE2-P10 - The CARBON project: Management strategies to optimize the carbon balance of forest ecosystems in a dry region of Germany**

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## **FE3: Understanding the impacts of climate and land Use change on tundra and northern boreal forest ecosystems**

## **FE4: Trends and advances in forest ecology: Ecological patterns and processes**

### **FE4-P1 - Dynamic water balance modeling for Bavaria's forests**

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### **FE4-P2 - Impacts of increased frequency of extreme droughts on structure and traits of high- and low-diversity forests in Brandenburg**

Jamir Priesner<sup>1,2</sup>, Boris Sakschewski<sup>2</sup>, Maik Billing<sup>2</sup>, Werner von Bloh<sup>2</sup>, Sarah Bereswill<sup>2</sup>, Kirsten Thonicke<sup>2</sup>, Britta Tietjen<sup>1</sup>

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### **FE4-P3 - Linking annual tree ring growth to high resolution vegetation indices within the new WALD-Puls monitoring network**

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**FE4-P4 - the abundance of oak trees in turkey oak-silver fir mixed stands has a profound impact on the overall resilience of forest to late frost and drought stress**

Concetta Lisella<sup>1</sup>, Alessandra Bottero<sup>3,4</sup>, Serena Antonucci<sup>2</sup>, Giovanni Santopuoli<sup>2</sup>, Roberto Tognetti<sup>5</sup>

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**FE4-P5 - The influence of environment on the development of *Abies alba* and *Quercus robur* seedlings**

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**FE4-P6 - Forest fire intensities matter for the post-fire development of moth communities**

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**FE4-P7 - Unveiling hidden worlds: A dive into the impact of forest management on tree-hole ecosystems**

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**FE4-P8 - Nutrient availability and habitat filtering shape saproxylic beetle community patterns along deadwood decomposition**

Ludwig Lettenmaier<sup>1</sup>, Claus Bässler<sup>2,3</sup>, Jonas Hagge<sup>4</sup>, Christoph Heibl<sup>2</sup>, Sebastian Seibold<sup>5</sup>, Simon Thorn<sup>4</sup>, Jörg Müller<sup>1,2</sup>

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**FE4-P9 - The diversity of nucleation techniques determines the richness and abundance of regenerating plants during tropical forest restoration**

Thales Castilhos de Freitas<sup>1</sup>, Leonardo Teixeira<sup>2</sup>, Antonio L. G. Silveira Junior<sup>1</sup>, Harry O. Venterink<sup>2</sup>, Fabrício A. Carvalho<sup>1</sup>

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**FE4-P10 - Drivers of forest structural complexity**

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**FE4-P11 - The influence of forest structure on the nutrient distribution in the vegetation layer in the Saale Elster Sandstein Observatory (SESO), Thuringia**

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**FE4-P12 - Niche convergence and biogeographic history shape elevational tree community assembly in a subtropical mountain forest**

Liang-Liang Ma<sup>1,4</sup>, Sebastian Seibold<sup>2</sup>, Marc Cadotte<sup>3</sup>, Jia-Yun Zou<sup>2,5</sup>, Jie Song<sup>1,4</sup>, Zhi-Qiong Mo<sup>1,4</sup>, Shao-Lin Tan<sup>1,4</sup>, Lin-Jiang Ye<sup>1,4</sup>, Wei Zheng<sup>1,4</sup>, Kevin Burgess<sup>6</sup>, Zhi-Fa Chen<sup>1</sup>, De-Tuan Liu<sup>1</sup>, Xing-Liang Yang<sup>7</sup>, Xiao-Chun Shi<sup>7</sup>, Wei Zhao<sup>7</sup>, Jie Liu<sup>1</sup>, De-Zhu Li<sup>1</sup>, Lian-Ming Gao<sup>1</sup>, Ya-Huang Luo<sup>1</sup>

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**FE4-P13 - Comparison of distribution, productivity and mortality models as a means for tree suitability prediction for European Beech**

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**FE4-P14 - LeafArea: A Python package for efficiently measuring leaf areas from photographs**

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**FE4-P15 - Enhancing forest genetics: Advanced amplification methods and marker comparisons in spruce**

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**FE4 – P16: Evidence-based cultivation recommendations for tree species in a changing climate**

Anabel Onay<sup>1</sup>, Wolfgang Falk<sup>1</sup>, Ute Bachmann-Gigl<sup>1</sup>, Eric Thurm<sup>2</sup>, Anna Wöhlbrandt<sup>2</sup>, Silvio Schüler<sup>3</sup>, Samuel Aspalter<sup>3</sup>, Debojyoti Chakraborty<sup>3</sup>

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ME1: Macroecology: investigating large-scale biodiversity patterns under global change

**ME1-P1 - A spatial inventory of freshwater macroinvertebrates in the Guineo-Congolian biodiversity hotspot**

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**ME1-P2 - Potential implications of climate change on the interplay between cocoa landscapes and biodiversity in Ghana and Côte d'Ivoire**

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**ME1-P3 –Leveraging plant functional and spectral trait records for distinguishing tropical ecosystem types**

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**ME1-P4 - Assessing topoclimatic drivers of vine-diversity in global wine regions under climate change**

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**ME1-P5 - BirdWatch - an online platform for the improvement of habitat suitability of farmland birds in the EU**

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Rik Hendrix<sup>4</sup>, Annelies de Meyer<sup>4</sup>, Ruth Sonnenschein<sup>5</sup>, Basil Tufai<sup>5</sup>, Bartolomeo Ventura<sup>5</sup>, Tomas Orlickas<sup>6</sup>,

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**ME1-P6 - How do the dispersal and landscape configuration affect processes of speciation and extinction?**

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**ME2: Collection-based research in plant ecology**

**ME2-P1 - Temperature thresholds for spring growth of perennial herbaceous plants**

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**ME3: Insights from globally coordinated and distributed experiments and surveys**

## NC1: Perspectives on biodiversity monitoring are diverse

NC1-P1 - Concept for a biodiversity monitoring in small standing waterbodies of the agricultural landscape in Germany

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NC1-P2 - DivMoSt - Monitoring of meadow orchards: Methods for an automated localization of meadow orchards and biodiversity evaluation of indicator organisms to supplement established biodiversity monitoring in Austria.

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NC1-P3 - Bumblebee monitoring in agricultural landscapes in Germany: the informative value of structured and unstructured data

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NC1-P4 - MarginUp! - How to assess the impact of new industrial feedstocks on biodiversity of marginal lands?

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**NC1-P5 - GolfBiodivers: The combination of traditional and novel approaches in a biodiversity monitoring scheme on golf courses**

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**NC1-P6 - Genetic monitoring of populations by amplicon based high-throughput genotyping**

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**NC1-P7 - Assessment of species diversity of Enchytraeidae (Annelida: Clitellata) along two abiotic gradients using metabarcoding**

Rebecca Rodewald<sup>1</sup>, Jingxuan Chen<sup>1</sup>, Bastian Heimburger<sup>1</sup>, André Junggebauer<sup>1</sup>, Mark Maraun<sup>1</sup>, Stefan Scheu<sup>1</sup>, Ina Schaefer<sup>1,2,3</sup>

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**NC2: Trends in grassland conservation and restoration**

**NC2-P1 - Biodiversity dynamics in response to land use intensification in Swiss grasslands**

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**NC2-P2 - Interactions between parasitic plants and invasive hosts: the experimental evidence**

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**NC2-P3 - Gene flow in three common grassland species – Isolation by distance or isolation by resistance?**

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## NC2-P4 - Woody encroachment effects on biodiversity and carbon storage of mountain grassland ecosystems

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## NC2-P5 - Vegetation diversity of alpine pastures in the Berchtesgaden Biosphere Region

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## NC2-P6 - Mitigating the effects of land management on farmland birds: a nesting ecology perspective

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## NC2-P7 - Quantity, not placement, of agri-environmental schemes influence the population and distribution of the grey partridge *Perdix perdix* in simulated landscape scenarios

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## NC3: New perspectives on biodiversity conservation and restoration success through biotic interactions

### NC3-P1 - Layer nests a standardized method to study multitrophic interactions of cavity nesting Hymenoptera

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### NC3-P2 - From office to field and back to the lab: A journey in European mink conservation

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## **NC3-P3 - Are wolves re-establishing a landscape of fear in the Bohemian Forest Ecosystem?**

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## NC4: Emerging challenges in wildlife ecology and management in the Anthropocene

### **NC4-P1 - Living in a polluted environment – Detection of microplastics in Eurasian otter (*Lutra lutra*) feces along the River Inn**

Ursula Nopp-Mayr<sup>1</sup>, Sarah Layendecker<sup>1</sup>, Marcia Sittenthaler<sup>1,2,5</sup>, Margit Zohmann-Neuberger<sup>1</sup>, Matthias Philipp<sup>3</sup>, Ralf Kägi<sup>3</sup>, Irene Weinberger<sup>4,5</sup>

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## NC5: The future of biodiversity in interdisciplinary research

### **NC5-P1 - The WiNoDa knowledge lab – data competence training for object-centered natural science collections research**

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### **NC5-P2 - Exploring the role and participation of local communities in forest fire management in the Western Himalayan Eco-Region**

Shruthi Gopirajan Andaladi Thekkethil<sup>1</sup>, Fabian Ewald Fassnacht<sup>2</sup>, Sebastian Schmidlein<sup>3</sup>, Pawan Kumar Joshi<sup>4,5</sup>, Somidh Saha<sup>1,3</sup>

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## NC6: New developments in the field of insect declines in Central Europe

### **NC6-P1 - What controls the demography of open forest insect species? – A primer for evidence-based habitat management**

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## **NC6-P2 - Radio telemetry of butterflies: research under challenging circumstances**

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## **NC7: Temporal biodiversity change analyses to support sustainable land management and conservation**

### **NC7-P1 - Analysing bird population trends from monitoring data with highly structured sampling designs**

Mirjam R. Rieger<sup>1</sup>, Christoph Grüneberg<sup>2</sup>, Michael Oberhaus<sup>2</sup>, Sven Trautmann<sup>3</sup>, Madalin Parepa<sup>1</sup>, Nils Anthes<sup>1</sup>

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### **NC7-P2 - Biodiversity changes in forests after cessation of management: the role of forest succession, woody biomass and saproxylic food webs**

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### **NC7-P3 - Small net local temporal changes in taxonomic, functional and phylogenetic biodiversity across European temperate forests**

Liping Wei and 39 co-authors

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### **NC7-P4 - Invasive species drive cross-ecosystem effects worldwide**

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### **NC7-P5 - Temporal effects on biodiversity and ecosystem function: a microbial perspective**

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## NC8: Evaluating protected areas for biodiversity conservation currently and in the future

NC8-P1 - Land use drives the unfavourable conservation status of biodiversity in Natura 2000 sites in Germany

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NC8-P2 - Protected area's importance for biodiversity conservation: a case study on ground beetles (Coleoptera: Carabidae) in Germany

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NC8-P3 - On the edge: Biodiversity effects of administrative boundaries of forest reserves

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NC8-P4 - Ex-situ regeneration of rare forest herbs – the case of *Chimaphila umbellata* and *Pyrola media*

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NC8-P5 - Soil fauna and vegetation respond to similar land use drivers but in non-congruent patterns

Julian Escher<sup>1</sup>, Benito Schöpke<sup>2,3,4</sup>, Carsten Brühl<sup>7</sup>, Karin Hohberg<sup>1</sup>, Ricarda Lehmitz<sup>1</sup>, Karsten Wesche<sup>1,5,6</sup>, Monika Wulf<sup>2,3</sup>

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PE1: Plant responses to the environment across scales

PE1-P1 - Climate and plant invasion: effect of drought on native and invasive *Prosopis* species in arid environments

Hamada Ali<sup>1</sup>, Ahmed Al-Wahaibi<sup>2</sup>

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PE1-P2 - Chemosensitivity of *Tanacetum vulgare* affects aphid colony growth regardless of the presence of below-ground herbivores

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PE1-P3 - Future climate conditions amplify the effects of drought intensity on grassland functioning

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PE1-P4 - Effect of nurse crops on photosynthesis of underplanted silver fir trees

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PE1-P5 - Linking drought, tree growth, and rhizosphere microbial communities in forests of beech, spruce, and pine in Bavaria

Claudia Barrera<sup>1</sup>, Sofia Bratchenko<sup>1</sup>, Gerhard Schmied<sup>2</sup>, Karin Pritsch<sup>3</sup>, Thorsten Grams<sup>1</sup>, Fabian Weikl<sup>1,3</sup>

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**PE1-P6 - Investigating the causes of the central dieback in Namibia's ring-forming tussock grass *Eragrostis nindensis***

Stephan Getzin<sup>1,2</sup>, Don Cowan<sup>3</sup>, Pedro Lebre<sup>3</sup>, Franziska Messirek<sup>1</sup>, Kerstin Wiegand<sup>1</sup>

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**PE1-P7 - Xylem anatomical and hydraulic traits vary within crown but not respond to water and nitrogen addition in *Populus tomentosa***

Yuwen Zhang<sup>1,2,3</sup>, Changjun Ding<sup>4</sup>, Yan Liu<sup>2,3</sup>, Shan Li<sup>5</sup>, Ximeng Li<sup>6</sup>, Benye Xi<sup>2,3</sup>, Jie Duan<sup>1,2,7,8</sup>

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**PE1-P8 - Effects of the surrounding landscape on hedgerow-associated plants**

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**PE1-P9 - The ECOSENSE project – Spatio-temporal dynamics of ecosystem processes assessed and modelled by smart autonomous sensor networks across scales**

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**PE1-P10 - Effects of limitation of nutrients N, P, and Cations on resource allocation for physical defense in canopy leaves in a central Amazon rainforest**

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**PE1-P11 - Unveiling the ecological drivers of flower morph frequencies in heterostylous plant**

Tomáš Dostálék<sup>1,2</sup>, Tsipe Aavik<sup>3</sup>, Jan Plue<sup>1,4</sup>, Sabrina Träger<sup>5,6</sup>, Hans Jacquemyn<sup>7</sup>, Iris Reinula<sup>3</sup>, Marie Ende<sup>5,6</sup>, Olivia Bernardsson<sup>7</sup>, Zuzana Münzbergová<sup>1,2</sup>

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**PE1-P12 - When and how: measuring thermal sensitivity in three temperate Central European timber species across a growing season *in situ* and in the lab**

Rebecca Schwutke<sup>1</sup>, Meike Ebenslander<sup>1</sup>, Christoph Leuschner<sup>1,2</sup>

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**PE2: Root traits across biomes - links between belowground traits, species diversity and ecological implications**

**PE2-P1 - Morphological diversity of the velamen radicum in the genus *Anthurium* (Araceae)**

Jessica Tay, Julia Werner, Gerhard Zotz

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## PE2-P2 - Soil nutrient limitation controls belowground carbon cycling in Central Amazon: the role of fine root dynamics

Jéssica Schmeisk Rosa<sup>1,2</sup>, Kelly Andersen<sup>5</sup>, Amanda Cordeiro<sup>5</sup>, Anna Carolina Moraes<sup>1</sup>, Ana Cláudia Salomão<sup>1</sup>, Rafael Assis<sup>1</sup>, Raffaello Di Ponzio<sup>1</sup>, Renata Almeida<sup>1</sup>, Maria Pires<sup>1</sup>, Hellen Fernanda Cunha<sup>1</sup>, Nathielly Martins<sup>1,2</sup>, Sheila Trierveiler<sup>1</sup>, Gyovanni Ribeiro<sup>1</sup>, José Augusto Salim<sup>6</sup>, Érick Oblitas<sup>1</sup>, Sara Coelho<sup>1</sup>, Bruno Takeshi<sup>1</sup>, Oscar Valverde-Barrantes<sup>7</sup>, José Luis Camargo<sup>1</sup>, Luiz Aragão<sup>9</sup>, Lina Mercado<sup>8</sup>, Iain Hartley<sup>8</sup>, Carlos Alberto Quesada<sup>1</sup>, Laynara Figueiredo<sup>1,2</sup>

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## PE2-P3 - Species specific fine root morphological traits and their interactions with soil microbial processes

Lucia Fuchsleger<sup>1</sup>, Oscar Valverde-Barrantes<sup>2</sup>, Eduardo Chacón-Madrigal<sup>3</sup>, Peter Hietz<sup>4</sup>, Judith Prommer<sup>1</sup>, Wolfgang Wanek<sup>1</sup>, Anton Weissensehofer<sup>5</sup>, Florian Hofhansl<sup>6</sup>

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## PE3: Carbon allocation in plants and ecosystems under climate change

### PE3-P1 - Effects of intra- and interspecific competition between two temperate tree species on carbon assimilation rates and carbon allocation under drought stress

Clara Stock<sup>1</sup>, Stefanie Dumberger, Mirjam Meischner, Melissa Wannenmacher, Simon Haberstroh, Christiane Werner

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### PE3-P2 - Storage capacity for surplus C in parenchyma cell fractions of alluvial forest trees as dependent on flooding frequency

Maxi Bergmann, Awaz Mohamed, Ina C. Meier

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### **PE3-P3 - The fate of surplus C in two estuarine alluvial forest tree species exposed to tidal flooding**

Diana Richter<sup>1</sup>, Boaz Hilman<sup>2</sup>, Benjamin L. Branoff<sup>3</sup>, Jens Dyckmans<sup>4</sup>, Kai Jensen<sup>5</sup>, Peter Müller<sup>6</sup>, Ina Meier<sup>1</sup>

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### **PE3-P4 - Seasonal changes in bark anatomy and chlorophyll content of five temperate tree species**

Ines Katharina Münchinger, Anne Charlott Fitzky, Benjamin Daniel Hesse, Sabine Rosner, Daniel Tholen

*Universität für Bodenkultur Wien (BOKU), Vienna, AT; ines.muenchinger@boku.ac.at*

### **PE3-P4 - Seasonal changes in bark anatomy and chlorophyll content of five temperate tree species**

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### **PE4: Water in plants under climate change - From cells to ecosystems**

#### **PE4-P1 - Effects of fire heat plume on hydraulics of young trees**

Zhiyi Chen, Andreas Bär, Stefan Mayr

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#### **PE4-P2 - The combinational effect of fertilization and drought: a case study on three temperate tree species**

Feng Feng, Barbara Beikircher, Andrea Ganthaler, Adriano Losso, Melvin Tyree, Stefan Mayr

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#### **PE4-P3 - Spruce trees exposed to two consecutive drought periods show a legacy effect in seedling growth and physiology**

Marc Goebel<sup>1</sup>, Marius Höhne<sup>2</sup>, Robert Bohrer<sup>2</sup>, Thorsten Grams<sup>2</sup>

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## **PE4-P4 - Tree-water relations of mature European beech and Douglas fir during wet and dry years - the role of structure and neighborhood**

Sharath S. Paligi<sup>2</sup>, Christina Hackmann<sup>1</sup>, Alice Penanhoat<sup>3</sup>, Heinz Coners<sup>2</sup>, Martina Mund<sup>1,4</sup>, Dominik Seidel<sup>3</sup>, Christian Ammer<sup>1</sup>, Christoph Leuschner<sup>2</sup>

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## **PE4-P5 - "The response of shrubs and trees to snow cover changes in the Alps"**

Carlotta Musso, Stefan Mayr, Andrea Ganthalter

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## **PE4-P6 - Soil water use in drought-stressed forests: A comparative study of six tree species**

Mladen Ognjenovic<sup>1</sup>, Martin Greve<sup>2</sup>, Janna Wambsganss<sup>2</sup>, Frank Schmidt<sup>2</sup>, Mike Brando<sup>2</sup>, Matthias Arend<sup>1</sup>

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## **PE4-P7 - Xylem embolism resistance of root, stem and leaf/twig in eight temperate species with contrasting xylem functional types along the degree of isohydryness**

Sharath Paligi<sup>1</sup>, Franziska Geuchen<sup>1</sup>, Christoph Leuschner<sup>1,2</sup>

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## **PE4-P8 - Effect of the species-rich mixtures of grass clover leys on flower visitors**

Chantal Syrovy<sup>1</sup>, Nina Weiher<sup>2</sup>, Peer Urbatzka<sup>2</sup>, Thomas Döring<sup>1</sup>

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## **PE4-P9 - Measurement-based new baselining strategy and distinguishing between nighttime transpiration and refilling**

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## PE5: Multiple stressors in Global-Change Ecology

### PE5-P1 - Interacting effects of land-use intensity and temperature on biodiversity and ecosystem functions along an elevational gradient in the German Alps

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### PE5-P2 - Interacting effects of climate change and land use intensity drive soil microbial biomass and community structure in pre-alpine grassland sites

Diana Rocio Andrade-Linares<sup>1</sup>, Sonia Melz<sup>1</sup>, Stefanie Schulz<sup>1</sup>, Max Schuchardt<sup>2</sup>, Noelia Garcia-Franco<sup>3</sup>, Mirella Schreiber<sup>4</sup>, Martin Wiesmeier<sup>5</sup>, Michael Dannenmann<sup>4</sup>, Anke Jentsch<sup>2</sup>, Michael Schlöter<sup>1,6</sup>

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### PE5-P3 - Effects of sexually transmitted fungal parasite on mating behaviour of ladybird hosts

Michal Řeřicha<sup>1</sup>, Petr Chajma<sup>1</sup>, Gabriela Vokálová<sup>1</sup>, Jan Buellesbach<sup>2</sup>, Michal Knapp<sup>1</sup>

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### PE5-P4 - Effects of larval starvation and adult mating on *Harmonia axyridis* life history traits and haemolymph parameters

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### PE5-P4 - Effects of larval starvation and adult mating on *Harmonia axyridis* life history traits and haemolymph

#### Parameters

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PE6: Ecosystem response to repeated climate extremes - an integrated approach across organizational scales

**PE6-P1 - Satellite detection of legacy effects of the 2018 drought on spring phenology in Europe**

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**PE6-P2 - Combining models and field observation to explore impacts of drought on amphibians in north-western Europe**

*Fairlie Kirkpatrick Baird<sup>1</sup>, Jeanette Hall<sup>1</sup>, Robert Jehle<sup>4</sup>, Àlex Miro<sup>1</sup>, Tariq Stark<sup>3</sup>, David OBrien<sup>1,2</sup>*

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**PE6-P3 - Impact of mixing European beech with conifers on soil microbes during summer drought**

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RS1: Remote sensing of biodiversity

RS2: Remote sensing for understanding sustainable land use across scales

RS2-P1 - Neural network models in standing dead trees detection: A comparative study of YOLO and Detectron approaches.

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RS2-P2 - A new approach towards mapping groundwater-dependent vegetation in the temperate biome using ECOSTRESS and Sentinel-2 data: A case study in Saxony-Anhalt

David Emanuel Schulz<sup>1</sup>, Léonard El-Hokayem<sup>1,2</sup>, Christopher Conrad<sup>1,2</sup>

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SC1: Fostering collaboration between ecological sciences and the arts: opportunities and challenges

SC2: Biodiversity and citizen science

**SC2-P1 - How can citizen science support stream restoration? A scoping study**

Roland Bischof<sup>1,2</sup>, Julia von Gönner<sup>1,2,3</sup>, Martin Friedrichs-Manthey<sup>1,2</sup>, Sebastian Birk<sup>4</sup>, Aletta Bonn<sup>1,2,3</sup>

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<sup>4</sup>University Duisburg Essen, Duisburg Essen, DE

**SC2-P2 - Detecting co-occurrences of an invasive local species through citizen science: the case of *Harmonia axyridis* in Argentina**

Baudino Florencia<sup>1,2</sup>, Ramiro Ripa<sup>2</sup>, Jorgelina Franzese<sup>2</sup>, Victoria Werenkraut<sup>2</sup>

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**SC2-P3 - Distribution of opportunistic plant observations on a local scale - which habitats are sampled most?**

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SC3: Bridging the gap between knowledge and action: applying biodiversity knowledge in society, policy and economy

**SC3-P1 - The TUM Green Office Weihenstephan presents its work transforming the campus, educating, and building a community, concentrating on the results of the first “Biodiversity week Weihenstephan”.**

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**SC3-P2 - Residual areas in the intensive agricultural landscape - a chance for Biodiversity?**

Laura Göhler, Matthias Jentzsch, Karl Wild, Ulrich Walz<sup>4</sup>

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SL1: Illuminating the black box of soil food webs across ecosystems, scales, and approaches

**SL1-P1 - Do nitrogen- or phosphorus-rich nutrient patches in soil attract specific ectomycorrhizal communities?**

Yang Yang, Johannes Ballauff, Andrea Polle

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**SL1-P2 - Influence of increasing proportion of Douglas fir and silver fir in mixed stands with beech on oribatid mite communities**

Ronja Wenglein<sup>1</sup>, Stefan Scheu<sup>1,2</sup>

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**SL1-P3 - Higher trophic levels and reduced direct plant resource uptake for microbes in response to lower litter quality**

Zheng Zhou<sup>1,3</sup>, Anton Potapov<sup>1,2</sup>, Linlin Zhong<sup>1</sup>, Zhijing Xie<sup>1</sup>, Stefan Scheu<sup>1</sup>, Melanie Pollierer<sup>1</sup>

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**SL1-P4 - Influence of trees on earthworm abundance and soil properties in wood pastures of Southern Transylvania, Romania**

Sachin Bhattacharai<sup>1,2</sup>, Daniela Sauer<sup>2</sup>, Martin Potthoff<sup>2</sup>, Simon Drollinger<sup>2</sup>, Stephen Boahen Asabere<sup>2</sup>, Raluca Enescu<sup>4</sup>, Stefan Zerbe<sup>3</sup>, Martin Sauerwein<sup>1</sup>

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**SL1-P5 - Shared community history strengthens plant diversity effects on belowground multitrophic functioning**

Angelos Amyntas<sup>1</sup>, Benoit Gauzens<sup>1</sup>, Marcel Ciobanu<sup>2</sup>, Lara Warnke<sup>3</sup>, Mark Maraun<sup>3</sup>, Jörg-Alfred Salamon<sup>4</sup>, Mona Merkle<sup>3</sup>, Leonardo Bassi<sup>5</sup>, Justus Hennecke<sup>1,5</sup>, Markus Lange<sup>6</sup>, Gerd Gleixner<sup>6</sup>, Stefan Scheu<sup>3</sup>, Nico Eisenhauer<sup>1,5</sup>, Ulrich Brose<sup>1</sup>

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SL1-P6 - How do different organic and mineral fertilizers affect abundance of Collembola?

Amged El-Harairy<sup>1,2</sup>, Isabel C. Kilian<sup>3</sup>, Thomas F. Döring<sup>3</sup>, Timo Kautz<sup>1</sup>

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## UE1: Urban biodiversity: how to assess the social-ecological value of urban environments

**UE1-P1 - PAPPUS – How human and biophysical factors jointly shape biodiversity and nature's contributions to people in cities**

Marco Moretti<sup>1</sup>, Marcel Hinziker<sup>7</sup>, Bertrand Fournier<sup>2</sup>, Lauren Cook<sup>3</sup>, Sebastian Ruile<sup>1,5</sup>, Joan Casanelles Abella<sup>1,3,6</sup>, Aline von Atzigen<sup>7</sup>, Yuxin Yin<sup>3,4</sup>, Noemi Bur<sup>3</sup>, Louis Dädlow<sup>2</sup>, Vivien Grothe<sup>2</sup>, Terry Hartig<sup>8</sup>

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## **UE1-P2 - The fitness of wild bees in urban community gardens**

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## **UE1-P3 - Exploring plant assembly in urban green spaces: A trait-based modelling approach**

Vivien Grothe<sup>1</sup>, Gala Mona Louise Dädlow<sup>1</sup>, Sebastian Richard Ruile<sup>2</sup>, Marco Moretti<sup>2</sup>, Bertrand Fournier<sup>1</sup>

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## **UE1-P4 - A new self-test to assess garden biodiversity**

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## UE2: Collaborative insights: A transdisciplinary perspective on urban biodiversity projects and lessons learnt

## UE3: Urban ecology meets urban planning - using ecological insight to increase people-nature interactions

### **UE3-P1 - CURT: the international network of Comparative Urban Ecology Research Training**

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### **UE3-P2 - Exploring the role of urban green spaces as Nature-based Solutions in Korea and Germany**

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### **UE3-P3 - Understanding the role of structural and environmental factors in green roof biodiversity**

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### **UE3-P4 - Urban trees: hydraulics of *Platanus acerifolia* under stress**

Stefan Mayr<sup>1</sup>, Kaat De Boeck<sup>2</sup>, Feng Feng<sup>1</sup>, Katrien Schaepdryver<sup>2</sup>, Elien Naert<sup>2</sup>, Luc Gerard Onana Onana<sup>1</sup>, Elsa Platzgummer<sup>1</sup>, Kathy Steppe<sup>2</sup>

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### **UE3-P5 - Interactions between tree species identity, development stage, and growing habitat (park vs. street) influenced soil respiration near urban trees of *Quercus robur* and *Quercus rubra***

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### **UE3-P6 - Urban waterfronts as areas where social-Ecological systems meet: A blue-green infrastructure connectivity perspective**

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### **UE3-P7 - Urban land fragmentation and climate change adaptation in Ghana**

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**UE3-P8 - Utilizing the Transversal Connectivity Index (TCI) to assess the existing and potential transversal connectivity among terrestrial and aquatic habitats across pan-European functional urban areas**

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**UE4: Potential and challenges of urban restoration**

**UE4-P1 - Green roofs: habitats facing climate change and biodiversity crisis**

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**UE4-P2 - Optimizing biodiversity support of solar parks implemented in open landscape**

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**UE4-P3 - UrbanPArt – Phenology of arthropods in urban green spaces and implications for urban grassland restoration**

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