

Soil biodiversity and ecosystem services

Involved projects: AGROEcoSeqC, EnergyLink, ARTEMIS

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Healthy soils can provide important ecosystem services and habitat for soil biodiversity. Crop diversification could support the provision of ecosystem services through its effects on soil fauna and microbial communities, and thereby represent a management practice to mitigate climate change in agroecosystems. However, how soil diversity relates to soil multifunctionality is not yet understood.

This breakout session will focus on the mechanisms by which above- and below-ground biodiversity drives key ecosystem functions in agroecosystems, such as biomass production, nutrient cycling, and SOC accumulation.

We invite submissions that explore the influence of plant diversity on soil fauna, microbial communities and soil organic matter quality. We particularly welcome research that investigates the relationship between biodiversity and functional diversity, microbial physiology, and carbon stabilisation, employing techniques such as isotopic labelling, molecular methods, biomarkers, greenhouse gas measurements, and modelling.