

# VITAL

*Ecosystem Service provision from coupled plant and microbial functional diversity in management grassland*

- Duration: 2009 - 2012
- [Project webpage](#)

## Project Partners

- Helmholtz Zentrum München, Germany
- Universitat de Barcelona, Spain
- Lancaster University, United Kingdom
- University of Innsbruck, Austria
- Ecophysiologie, Agronomie et Nutritions N, C, S. UMR INRA UCBN 950, France
- Laboratoire d'Ecologie Microbienne de Lyon (LEM)
- Laboratoire d'Ecologie Alpine

## Project summary

Semi-natural grasslands (extensively managed or restored) are key elements of European landscapes providing central ecosystem services (ES) to human livelihoods. However, facing global changes European agriculture is challenged to provide multiple ES such as carbon storage, protection of water quality, economically viable production levels and biodiversity conservation. Yet, basic understanding of ecological constraints and opportunities for multifunctionality is missing. The Project VITAL aims to investigate how the coupling among plant and soil microbial biodiversity and their coupled impact on carbon and nitrogen cycles underpins the delivery of multiple ecosystem services by semi-natural grasslands. Source: [VITAL project summary](#)

## Hypotheses

The delivery of multiple ecosystem services in semi-natural, and its vulnerability to changing management, can be explained by the coupling among plant and soil microbial functional diversity, and its impacts on carbon and nitrogen turnover.

## Keywords

- [ecosystem services](#)
- functional traits
- [mountain grassland management](#)
- [semi-natural grasslands](#)
- biodiversity
- [climate change](#)

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