ConservES

Living-lab approach to floral enrichment as a tool to conserve biodiversity and maximising ecosystem services in European agricultural landscapes

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Background

There are various drivers that forward simplification of ecological networks inducing a loss of farmland biodiversity and associated ecosystem services. Among the many ecosystem services of great importance to agricultural processes are pollination and the control of pests and weeds.

The Project

The ConservES project will focus on the importance of non-crop habitats that either already exist (hedgerows) or have been created (flower strips) to enhance the diversity of organisms, pest and weed control and pollination. It works along a climatic gradient from mild Atlantic climates in France, over Belgium and Southern Germany to more continental climates of central Europe in Czech Republic.

The project is multidisciplinary and based on the combination of four approaches:

- The concept of the real laboratory
- BioBlitz field data collection in each study region
- Field trials to increase plant species diversity
- Simulations through spatial modeling.

Objectives

The overall objective is to conserve biodiversity in agroecosystems through promoting habitat enhancement, such as increasing landscape complexity and adequate field management with floral enrichment without causing yield losses to farmers.

The operational objectives include:

- Develop local Living labs as a method for long-term biodiversity conservation in agroecosystems
- Understand the effects of floral enrichment on agrobiodiversity to assess synergies and trade-offs between the potential of ES (pollination/pest control) and disservices (weeds and herbivory), and determine how effects are modulated by landscape structure and climatic conditions
- Develop integrated biodiversity indicators to optimize ES provision, and assess the interrelationship between cropland biodiversity and ecosystem services that support pesticide-reduced agriculture and its effects on yield quantity and quality.
- Communicate and disseminate results of ConservES with and to multiple actor groups

The project in brief

8 partner organizations	4 European countries
Coordination: University of Rennes	Role of DLG: Leading work package communication and dissemination together with Living Lab CLEF
Start: 1. March 2023	End: 28. February 2026
Biodiversa+	Project number: Biodiversa2021-319