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## **Identification and validation of indicators of soil biodiversity**

As the pressures on soil systems from changes such as growing populations and intensive agriculture increase globally it is becoming more important to understand soil processes and move towards sustainable land use and management. It is critical that soil processes are fully understood and that the most appropriate properties of soil are monitored in order to maintain soil health. Most soil processes are influenced by soil fauna. Therefore soil faunal interactions play a fundamental role in ensuring sustainable use of soils and being able to assess changes in soil biodiversity is essential to understanding changes in soil functions and ecosystem services associated with them.

The overall aim of this project is the identification and validation of indicators of soil biodiversity. The specific objectives of this project are as follows:

To examine the relationships between components of soil fauna and methods for accessing ecosystem function, for example, bait lamina strips.

- Assessment of the applicability of the unified neutral theory of biodiversity to soil animal assemblages, through examinations of alpha and beta diversity at different spatial scales, and to quantify the importance of alpha and beta diversity in biodiversity assessment.
- Assessment the value of various soil animal taxa as indicators of soil biodiversity through examination of the changes in biodiversity along a European transects and in some long terms experiments.