

*New EU Research Project SOB4ES*

## **Sustainable land management through validated and robust soil biodiversity indicators for the cost-effective assessment of ecosystem condition**

*On the 14-15th of June 2023, the Kick-off meeting of the multidisciplinary consortium of the European research project SOB4ES, takes place in Vigo, Spain. The consortium, led by Professor Dr Maria J. I. Briones from Universidade de Vigo, comprises 17 EU-partners and two associated partners. Together, they will develop and test applicable indicators for soil biodiversity and ecosystem services for policy evaluation in support of the EU Soil Strategy.*

The goal of the EU Soil Strategy is that by 2050, all soils in the EU should be healthy. Soil health means that soils continuously provide as many ecosystem services in the greatest variety as possible. However, in order to make progress, it is essential to fully integrate soil biodiversity in land management and planning. Currently, soil biodiversity receives little attention in large monitoring efforts when compared other groups, such as higher plants and vertebrates. Consequently, the contribution soil biodiversity makes to ecosystem services is vastly overlooked, not objectively quantifiable, invisible to society, and lacks integration into EU regulations and policy instruments. These shortcomings need to be addressed through careful examination of soil biodiversity status and its contribution to various ecosystem services under various land uses, including soils from urban, agriculture, forest, (semi)-natural, wetlands, drylands, industrial and mining environments.

To this end, the just launched research project SOB4ES (Integrating **SOil Biodiversity to Ecosystem Services**) sets out to develop an integrated framework that fully includes soil biodiversity contribution to ecosystem services across relevant spatial and temporal scales. The consortium will also test the cost-effectiveness of soil biodiversity indicators that reliably reflect the effects of land management on the delivery of ecosystem services under a range of land use conditions representative for Europe.

### **Making soil biodiversity and its contribution to ecosystem services visible to society alongside integration into EU policies**

“The challenge is to provide knowledge on soil biodiversity to allow policy makers to integrate effective soil biodiversity conservation measures into EU legislation, such as regarding soil health. Therefore, the long-term aim of SOB4ES is to support the EU Soil Strategy and the upcoming Soil Health Law with policy developments that include concrete measures and incentives for ensuring the protection, restoration and sustainable use of soils across the EU,”



# Press Release

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says Dr Maria J. I. Briones, Professor at the Departamento de Ecología y Biología Animal at the Universidade de Vigo and coordinator of the SOB4ES consortium. “Through supporting a robust monitoring and evaluation system, SOB4ES will contribute to fully integrating soil biodiversity into land management and planning as well as legally binding protection measures,” she adds.

To reach these ambitious goals, the SOB4ES research team will assess soil biodiversity community composition, its spatial and temporal dynamics, linkages with aboveground biodiversity and ecological network structures in response to land uses types and intensity. The team also aims to identify natural and human-induced factors that directly or indirectly drive soil biodiversity changes and to test the cost-effectiveness of known soil biodiversity structural and functional indicators for EU soils in response to changes in land use intensity across different pedoclimatic regions.

Understanding the interrelationships between soil biodiversity and ecosystem services for representative land uses and pedoclimatic regions, as well as the spatial variations of potential drivers and pressures impacting on ecosystem services interactions will be essential to design and implement ‘soil biodiversity-friendly’ land management interventions.

In order to integrate soil biodiversity and its contribution to ecosystem services in EU policy-based incentives, SOB4ES will develop a harmonised and cost-effective assessment framework that can estimate the direct and indirect Total Economic Values of soil biodiversity per land use type and intensity across different ecosystems. This knowledge will enable the identification of priority areas for future ecological restoration and conservation.

With these newly gained insights, the SOB4ES team will also integrate ecological knowledge of soil biodiversity into the daily life of Europeans by interactively exchanging knowledge, raising public awareness and societal appreciation of the vital functions of soil biodiversity and its contribution to ecosystem services.

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## **Project Key Facts**

*Full Name:* SOB4ES – Integrating Soil Biodiversity to Ecosystem Services

*Grant Agreement:* 101112831

*Start Date:* 1<sup>st</sup> of June 2023

*Duration:* 60 months (until 31<sup>st</sup> May 2028)

*Budget:* €7,213,229 (EU-funded) + €1,206,282 (associated partners\*)

*Coordinator:* Vigo University, Spain

*Website:* [www.sob4es.eu](http://www.sob4es.eu)



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## Project Partners

- University of Vigo, Spain
- INRAE - Institut National de Recherche pour l'Agriculture, l'Alimentation et l'environnement, France
- KNAW - Royal Netherlands Academy of Arts and Sciences, The Netherlands
- University College Dublin/National University of Ireland Dublin, Republic of Ireland
- University of Catania, Italy
- KU Leuven, Belgium
- Charles University, Czech Republic
- The Agricultural Research Organisation of Israel – The Volcani Centre, Israel
- Institute of Biology Bucharest, Romania
- University of Ljubljana, Slovenia
- Cologne University, Germany
- Aristotle University of Thessaloniki, Greece
- Swedish Agricultural University, Sweden
- Gent University, Belgium
- European Research and Project Office GmbH, Germany
- Mel Finca Organica S. Coop. Galega, Spain
- Airfield Estate, Republic of Ireland
- WSL - Swiss Federal Institute for Forest, Snow and Landscape Research, Switzerland\*
- Harper Adams University, United Kingdom\*

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