



Successful launch of the Carbon 4 Soil Quality project in the Mediterranean region

The first steps have been taken towards the successful implementation of the “Capturing and Storing Atmospheric CO₂ for Improvement of Soil Quality - Carbon 4 Soil Quality” project on 1 and 2 February 2024. Eight renowned universities and institutes from Italy, Spain, Greece, North Macedonia, Montenegro, and Slovenia met in the beautiful city of Bled in Slovenia to explore the possibilities in the field of carbon farming and its benefits for the improvement of soil quality in agriculture.



There is growing concern about climate change caused by the increased concentration of carbon dioxide in the atmosphere. Therefore, much attention is being paid to various innovative ideas and technologies that have the potential to increase carbon sequestration through changes in agriculture and forestry as well as geoengineering techniques such as carbon capture and storage.

While most of the Earth's carbon is stored in the oceans, soils harbour about 75% of the carbon on land, which is three times the amount found in living plants and animals. Carbon is stored in soil mainly as organic matter. An increase in this substance not only promotes carbon sequestration but also improves the quality of the soil by increasing water and nutrient retention, thus increasing plant productivity in both natural landscapes and agriculture. In addition, it contributes to an improved soil structure, minimizes erosion, and consequently increases water storage in the soil, both in groundwater and in surface waters. Ultimately, these positive effects contribute to greater food security, as they increase soil biodiversity and provide a good habitat for soil-living organisms.



Over the next 27 months, the consortium partners will take up the challenge of establishing a methodological basis and developing a “Toolbox for carbon farming” consisting of:

- Catalogue of soil organic reference values,
- Methodology for organic carbon analysis and soil quality monitoring,
- Guidelines for carbon farming techniques, Carbon farming business models,
- Recommendations on agriculture carbon credit schemes and environmental certification systems.

These tools will help farmers adopt carbon-friendly practices in different regions and countries of the Mediterranean. Cross-country collaboration is needed to study different Mediterranean climates (sub-tropical, oceanic, semi-arid, arid), different erosion conditions and soil types, and to develop a catalogue of soil organic reference values.

Our discussion at a kick-off meeting in Bled highlighted many differences between the climate and soil conditions faced by our partners. The speakers from the University of Almeria, Spain, showed us how they are facing the reality of dry climate and soil aridity, as the average rainfall has decreased from 300 to 200 litres per year in the last ten years. We are convinced that the analysis and development of organic carbon farming and soil quality monitoring methods specific to these regions will lead to more successful guidelines and recommendations for farmers applying the new farming methods. To promote the uptake of the developed carbon farming models and techniques, carbon credit and certification schemes will be prepared, and training material will be tested in different countries.

Project Carbon 4 Soil Quality is supported by the Interreg Euro-MED programme and co-funded by the European Union. The consortium consists of:

- [Agricultural Institute of Slovenia \(SI\)](#) as the lead partner,
- [Institute for Sustainable Development \(SI\)](#),
- [Aristotle University of Thessaloniki \(EL\)](#),
- [University of Almeria \(ES\)](#),
- [Ri.nova Cooperative Society \(IT\)](#),
- [University of Padova \(IT\)](#),
- [University of Montenegro, Biotechnical Faculty \(ME\)](#),
- [University "SS Cyril and Methodius" - Institute of Agriculture \(MK\)](#).

The project gives the consortium the opportunity to benefit from cooperation between partners and to develop business and governance models for adaptation, that take regional specificities into account. We appreciate the importance of a bottom-up approach to policy cooperation in order to better prepare for and manage climate change and improve our living conditions.

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