



Carbonica Excellence Hub: Advancing Carbon Farming Knowledge, MRV Practice and Policy in the Euro-MED Region

Hosted by project manager of Carbonica Excellence Hub:
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Institution| Department:

Interbalkan Environment Centre- Green Innovation Hub
Scientific Coordinator of the CARBONICA project



InterBalkan Environment Center - Green Innovation Hub



Fieldwork
action



Spectroradiometer
and creation of
spectral libraries



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Soil and water
chemical
analysis
Remote sensing &
GIS



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EU Laws and Policies

- **Biodiversity Strategy 2030:** Reverses biodiversity loss by 2030 through expanded protected areas, ecosystem restoration, and integrating nature into decision-making; supported by EU monitoring tools.
- **Nature Restoration Law:** First EU-wide restoration law with binding targets to restore 20% of land/sea by 2030 and all degraded ecosystems by 2050; includes goals for pollinators, soil carbon, wetlands, forests, rivers, marine habitats, and urban green space, with National Restoration Plans due in 2026.



The banner features the European Commission logo at the top left. The main title "EU Biodiversity Strategy for 2030" is in large white text, with the subtitle "Bringing nature back into our lives" below it. A photograph of a vibrant field of yellow and red flowers is on the left. A green leaf-shaped graphic on the right contains the text "Nature Restoration Law For people, climate, and planet". The date "22 June 2022 #EUGreenDeal" is in the bottom right corner. Below the banner, a graphic of a stylized flower with five circular petals contains text and images related to biodiversity and restoration. The petals include: "Over half of global GDP depends on nature and the services it provides. Construction, agriculture, food and health sectors all highly depend on it." (with a person on a construction site), "More than 75% of global food crops depend on pollinators" (with a butterfly on flowers), "40% of the world's land is degraded. Costs associated with soil degradation in the EU already exceed EUR 50 billion a year" (with a field and a fork), and "Our global food systems are responsible for 80% of deforestation, 70% of freshwater use and are the single greatest cause of terrestrial biodiversity loss" (with a globe).

Source: https://commission.europa.eu/index_en



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SOILS PROVIDE
95% OF OUR FOOD,
YET MANY SOILS ARE UNHEALTHY

#EUDataCrunch



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IBEC
INTERBALKAN
ENVIRONMENT CENTER

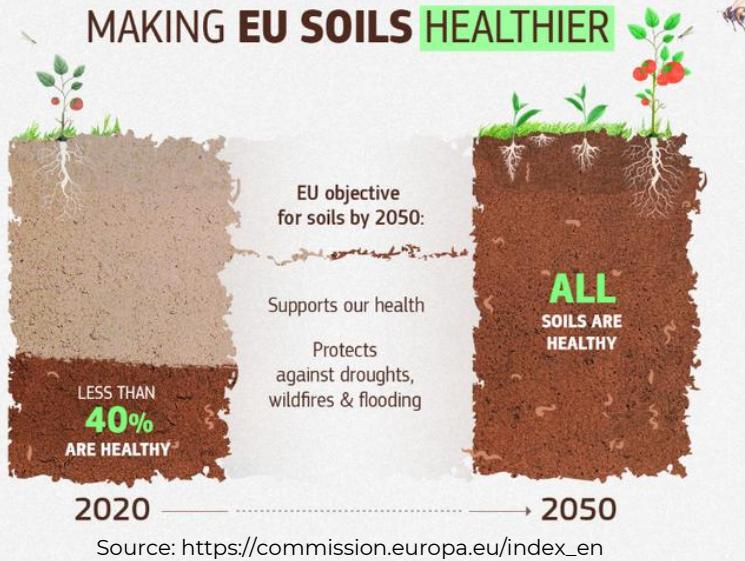


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EU Laws and Policies

Soil Monitoring Law: EU-wide framework to achieve healthy soils by 2050; common assessment method, soil health classes, target values, and monitoring of degradation drivers such as sealing, land take, PFAS, and pesticides.

- Farm Sustainability Data Network:** Integrating economic, environmental, and social data for farm sustainability and data accuracy across the EU.
- European Climate Law:** This legislation set a mandatory goal of reducing net greenhouse gas (GHG) emissions by 55% by the year 2030, as an important part of **EU Green Deal**.



What is the CRCF?

EU's Carbon Removals and Carbon Farming Framework (CRCF):
the policy mechanism to certify and incentivize removals in agriculture, forestry, soils.

HOW DOES IT WORK?



Source: <https://wwwarbonics.com/knowledge-hub/european-union-new-carbon-certification-proposal-crcf>

CARBON REMOVAL CERTIFICATION FRAMEWORK – CORE INTEGRITY PILLARS



Permanence

- Long-term carbon storage
- Assessment of reversal risks (erosion, fire, biodiversity loss.)
- Monitoring over decades



Additionality

- Beyond business-as-usual
- Evidence that carbon gains occur *because* of the intervention
- Policy and financial additionality



Measurability & MRV

- Baseline definition
- Quantified SOC's biomass increases
- Transparent Monitoring-Reporting-Verification
- Third-party audit



Environmental Safeguards

- Protect ecosystems & habitats
- Avoid Monocultures and chemical inertia



Traceability & Transparency

- Public registries
- No double counting
- Full traceability



Social Integrity

- Respect land rights
- Farmer engagement
- Fair benefit-sharing

CARBON REMOVAL CERTIFICATION requires environmental + social integrity climate benefits



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- **Quantification:** Carbon removal activities need to be measured accurately and deliver clear-cut benefits for the climate;
- **Additionality:** Carbon removal activities need to go beyond existing practices and what is required by law;
- **Long-term storage:** Certificates are linked to the duration of carbon storage so as to ensure permanent storage;
- **Sustainability:** Carbon removal activities must preserve or contribute to sustainability objectives such as climate change adaptation, circular economy, water and marine resources, and biodiversity

QU.A.L.ITY criteria for carbon farming certification process



QUANTIFICATION



ADDITIONALITY



LONG-TERM
STORAGE



SUSTAINABILITY



Carbonica

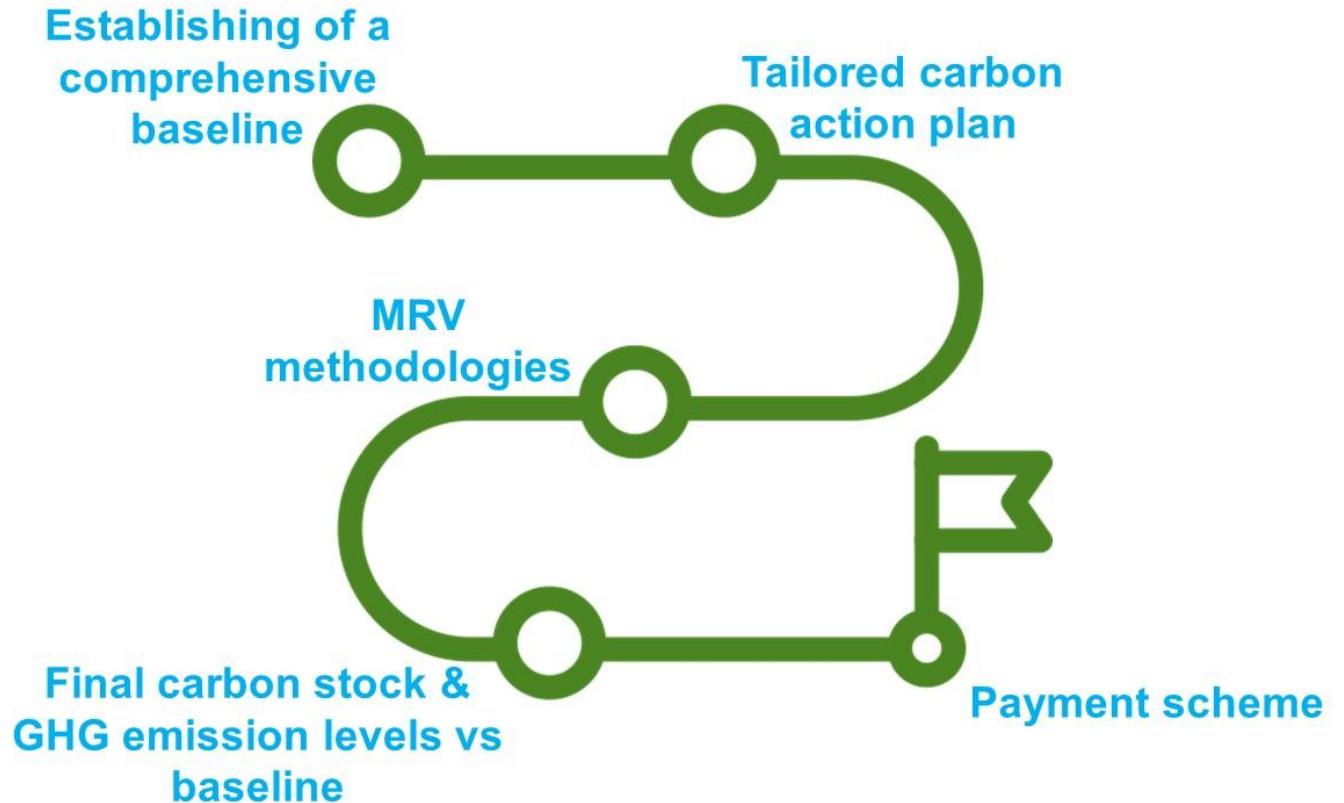


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CARBONICA HORIZON & CO₂ Solutions Living Lab Testing Nature Positive Solutions in Agriculture

Pilot Sites: Broccoli (Orestiada), Kiwi (Chryssoupoli), Grapevine (Epanomi)

Proven Benefits: Increased carbon storage & reduced emissions

Supporting Farmers: Practical frameworks for sustainable agriculture



Certified by

European Network of Living Labs



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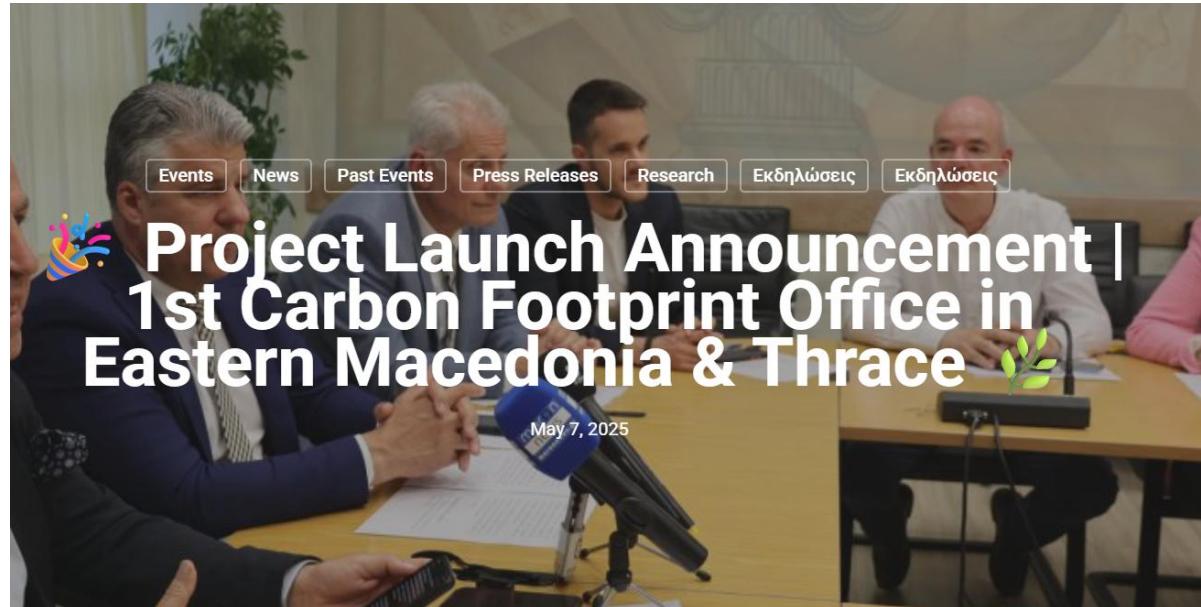


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Establishment of the Carbon Office in the Region of East Macedonia and Thrace

- **A new regional structure** unifying public authorities, academia, private actors, and civil society into a single ecosystem for climate-smart agriculture, coordinating engagement, capacity building, and strategic alignment, **mobilizing with public funds**.
- **Integration with regional strategy (RIS3):** the Carbon Office links its work with the green development strategy of Eastern Macedonia & Thrace, ensuring coherence with broader sustainability and climate goals



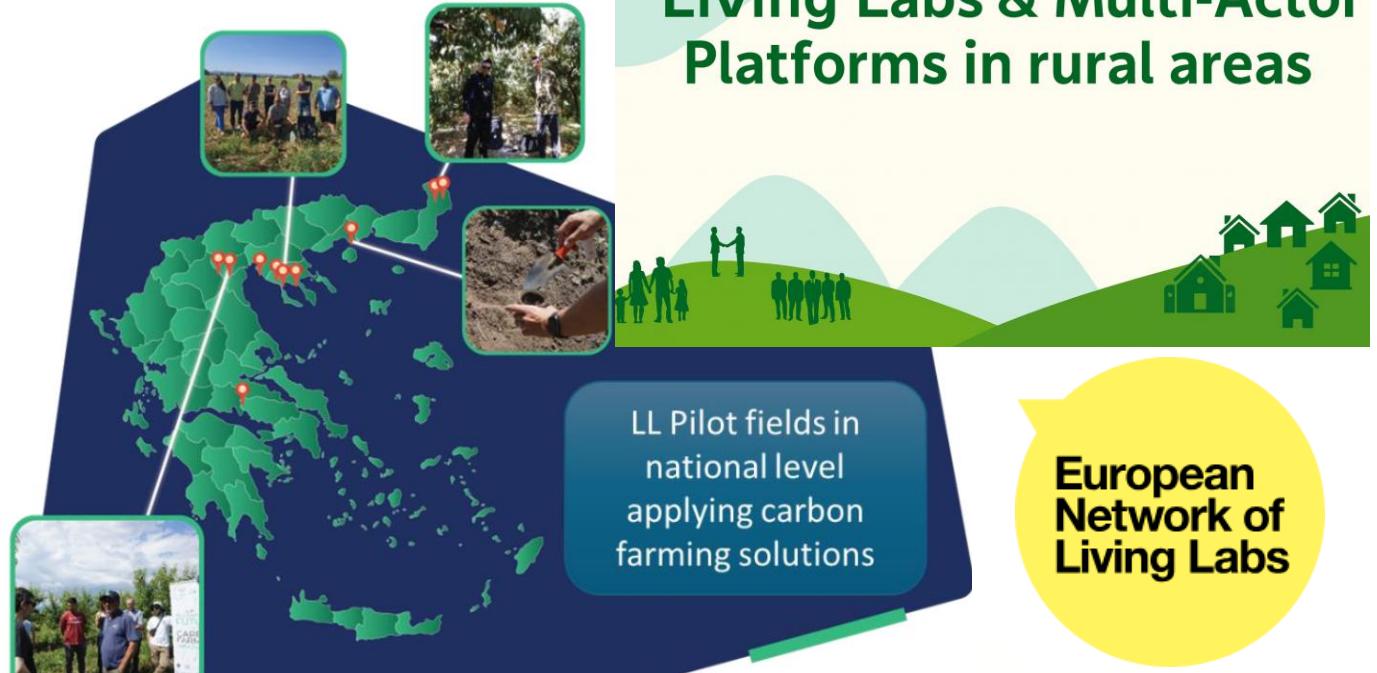


Establishment of the Carbon Office in the Region of East Macedonia and Thrace



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Living Labs & Multi-Actor Platforms in rural areas



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- Comprehensive stakeholder mapping across the agri-food value chain, identifying roles, synergies, and engagement pathways for continued regional coordination.
- A multi-actor network with a jointly developed action plan, anchoring collaboration across public authorities, private actors, academia, farmers, and civil society.
- Living Lab provides continuous innovation capacity: ongoing co-creation, experimentation, and testing of nature-based solutions, carbon-farming practices, technologies, and climate-smart approaches.
- Designating a pilot site at Tenagi Filippon, developed as a Living Lab in line with participatory innovation standards;



Carbon Office in PAMTH:

Making sure the CARBONICA project lives beyond its funding cycle



Carbonica

- Supports soil-health and carbon-removal objectives: activities focused on increasing soil organic stocks, reducing soil pollution, enhancing biodiversity, and aligning with the CRCF, the EU Soil Mission, the EU Soil Monitoring Law and other climate positive EU frameworks.
- Sustains implementation beyond funding: the Carbon Office leverages LL infrastructures to explore barriers, test certification-related challenges, mobilize public funds, and maintain field-based collaboration — creating a durable governance and innovation mechanism for future carbon-farming actions.



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Thank you!!!

