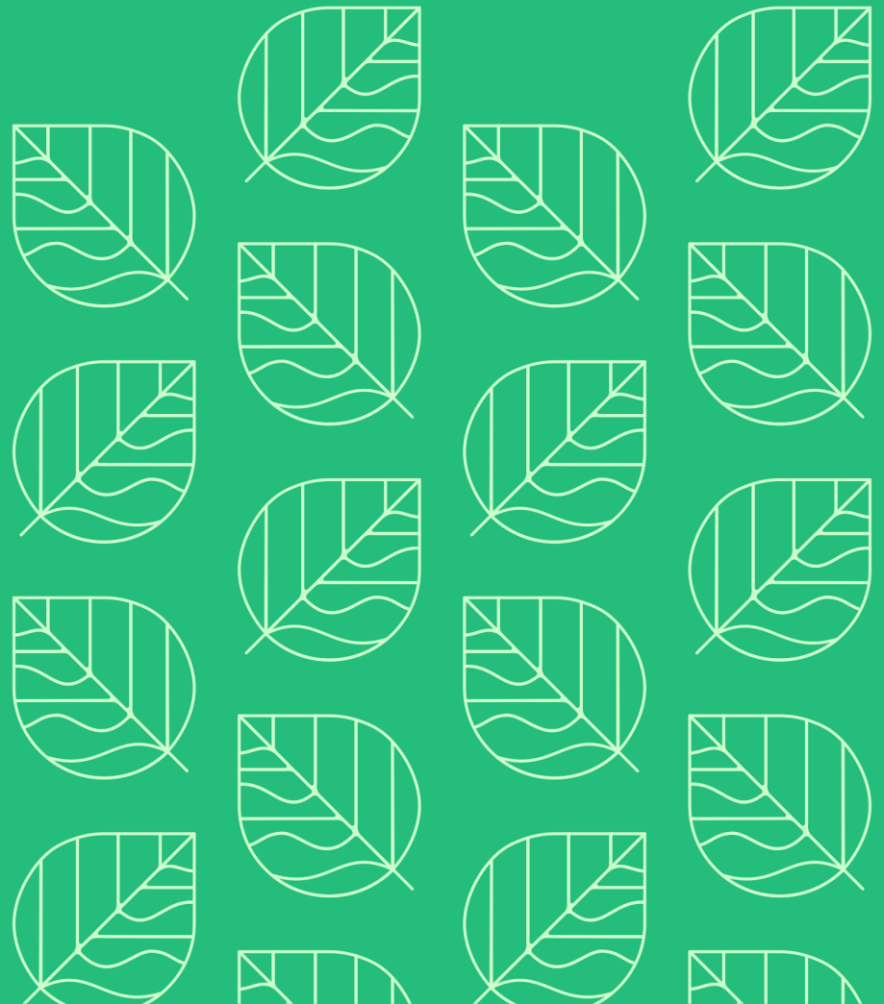
Transformative Living Labs for Soil Health:
Advancing Regenerative and Conservation Agriculture Across Europe



From soil health to farm resilience: Policy, finance and risk sharing for scaling regenerative and conservation agriculture practices. Brussels June 9, 2026

TRAILS4SOIL

An overview of Regenerative & Conservation Agriculture Practices, and an introduction to TRAILS4SOIL

Prof Dr Emilio González

TRAILS4SOIL coordinator

emilio.gonzalez@uco.es

www.trails4soil.eu

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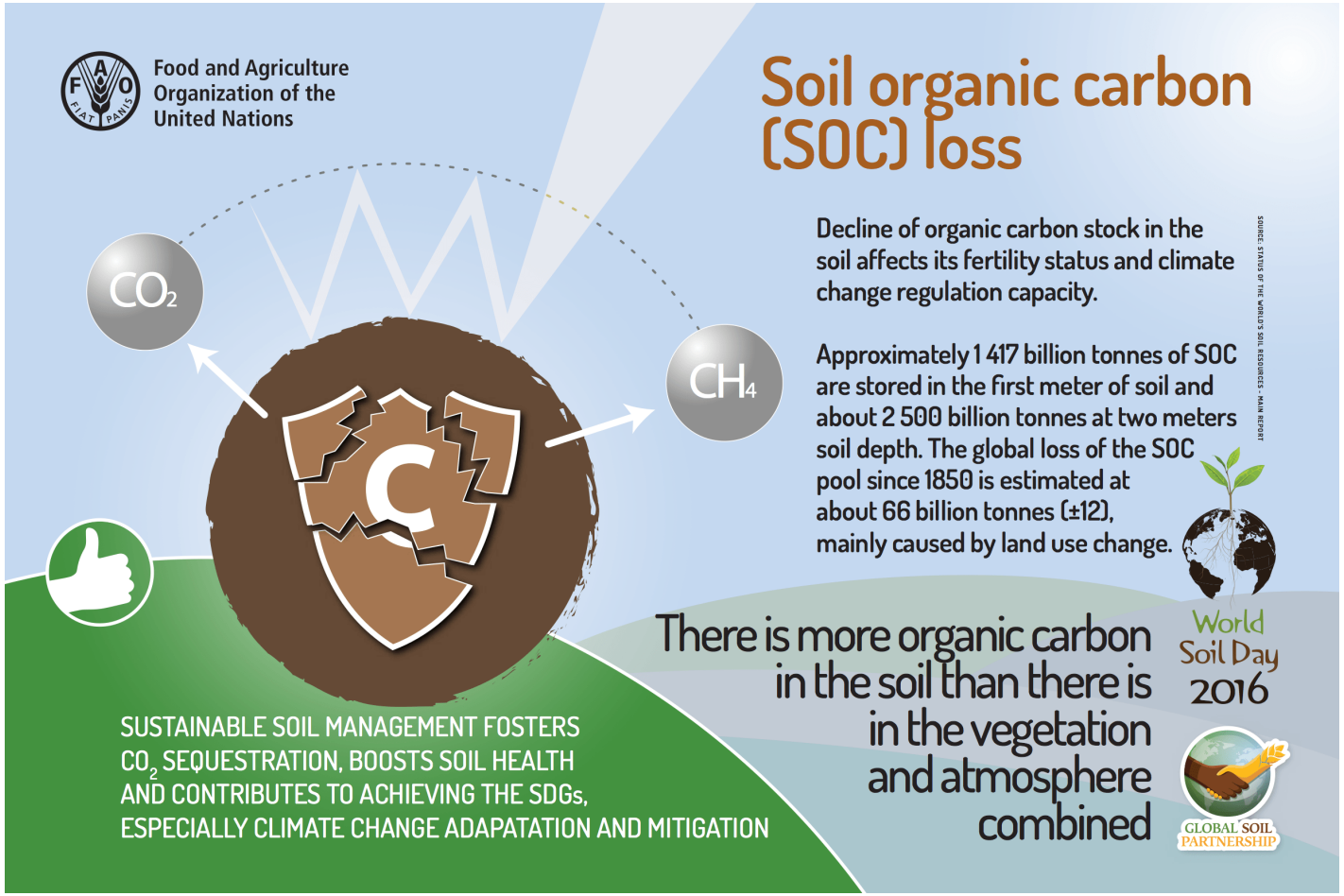

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Guadalquivir river carrying soil sediments, Cordoba, Spain
Roman bridge next to the UNESCO’s World Heritage Mosque-Cathedral

The **mouth of the Guadalquivir River in Spain**.

The **sediments** carried by the river are **deposited in the ocean**.

River Thames, London
House of Parliament

River Tiber, north of Rome

River Douro, north of Portugal

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Definition and Interpretation

Gluten free diet

Dairy free diet

Paleo diet

Carnivore diet

Vegan diet

Blood type diet

Raw food diet

The ingredients…

Fruitarian diet

Pescatarian diet

Low salt diet

Low calorie diet

Vegan diet

Low fat diet

Low carb diet

Definition and Interpretation

TRAILS4 SOIL

Biological Agriculture

Biodynamic Farming

Organic Agriculture

Agro-ecology

Farming for Nature

High Nature Value farming

Sustainable Agriculture

Sustainable Farming Systems

Carbon farming

Climate Resilient Systems

Climate Smart Agriculture

Mulch/Living mulch tillage

Min-till / No-till / Zero-till

Conservation Tillage

Regenerative Agriculture

Conservation Agriculture

Crop-livestock integration

Adaptive grazing systems

Holistic planned grazing

Mob grazing

Tall grass grazing

Silvo pasture systems

Silvo arable systems

Agroforesty


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Outcome focus: healthier soils that support productivity, climate adaptation, biodiversity and farm economic viability.

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Transformative Living Labs for Soil Health:

Advancing Regenerative and Conservation Agriculture Across Europe

Project with 22 partners from 12 countries.

Total budget: 14,1 M € (EU contribution: 11,7 M €).

Duration: 60 months. Start: 1 July 2025.

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UNIVERSIDADE DE ÉVORA

BODEN LEBEN

UNIVERSITY OF GLOUCESTERSHIRE

EARA

ECAF
European Conservation Agriculture Federation

GKB

Institute for European Environmental Policy

CNCPS

Fachhochschule Südwestfalen
University of Applied Sciences

AEAC.SV
Asociación Española Agricultura de Conservación Suelos Vivos

1869 USAMV CLUJ-NAPOCA

UNIVERSITY OF GREENWICH
Natural Resources Institute

BF UNIVERSITY OF LJUBLJANA
Biotechnical Faculty

BOKU UNIVERSITY

UNIVERSITÀ DEGLI STUDI DI TERAMO

ASAJA SEVILLA

FH Bern University of Applied Sciences

FiBL Switzerland

SAI PLATFORM

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• Soil Health Challenges in Europe

Soil degradation agents

- Land use changes
- Increase in rainfall intensity due to climate change
- Unsustainable intensive agricultural management
- Excessive tillage
- Monocropping
- Heavy machinery use
- Over-use of agrochemicals
- Lack of vegetation cover

- Erosion
- Compaction
- Soil organic matter decline
- Reduction of biological activity
- Loss in soil biodiversity

Soil Threats

Impact on soil degradation

60% of European soils are degraded

- **2.46 t/ha/year** soil erosion (average rate)
- **13-22.5%** erosion increase projected (2050)
- **2.5-50%** yield reduction to soil compaction
- **970Mt** soil loss
- Up to EUR **38 billion/year** in costs by soil loss

- **> 25%** of European soils at risk of desertification
- **> 25%** of soils affected by biodiversity loss

- Contributes to GHG emissions
- **0,5%** annual carbon loss in agricultural soils

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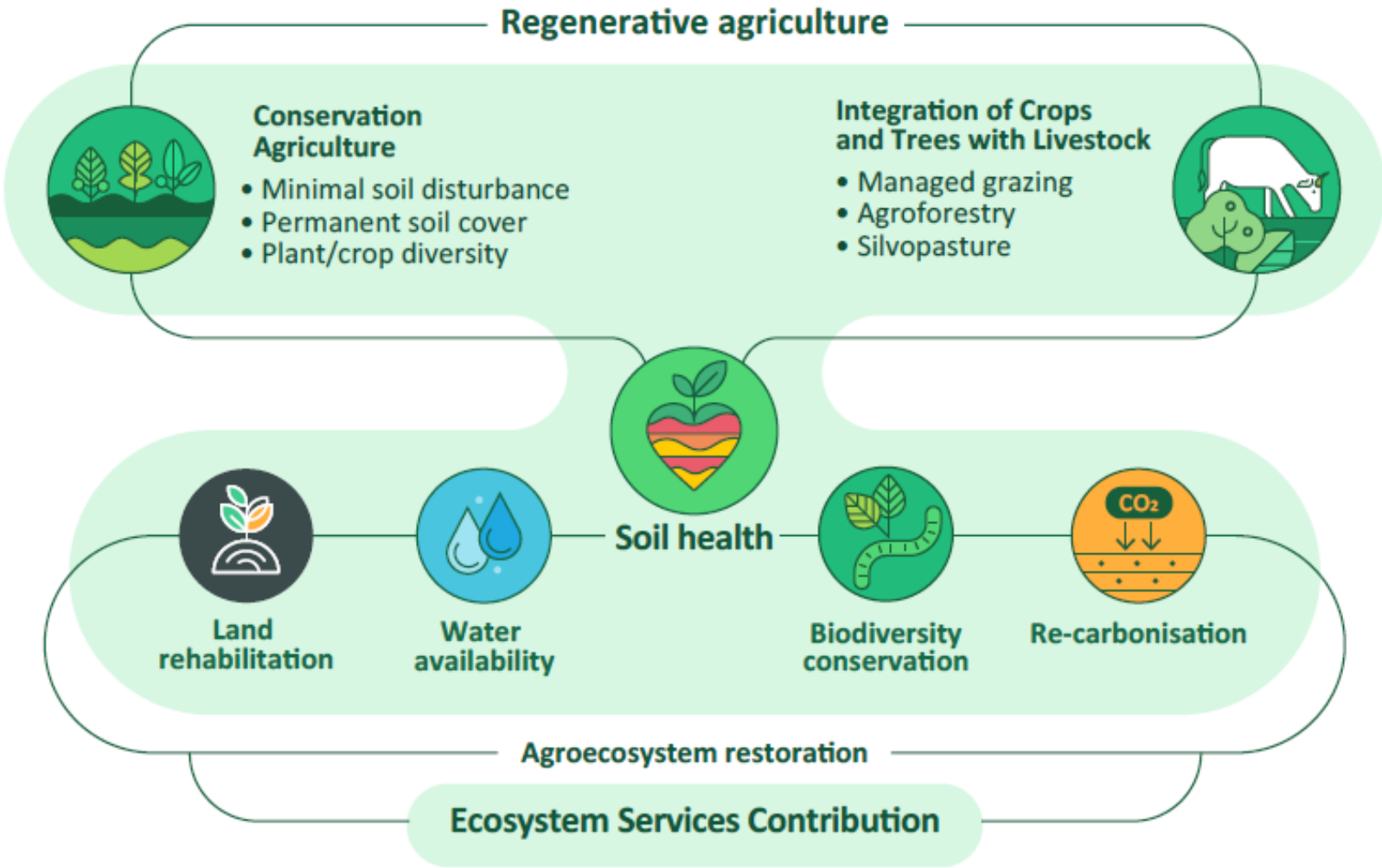
- **Regenerative and Conservation Agriculture Practices Contributions**



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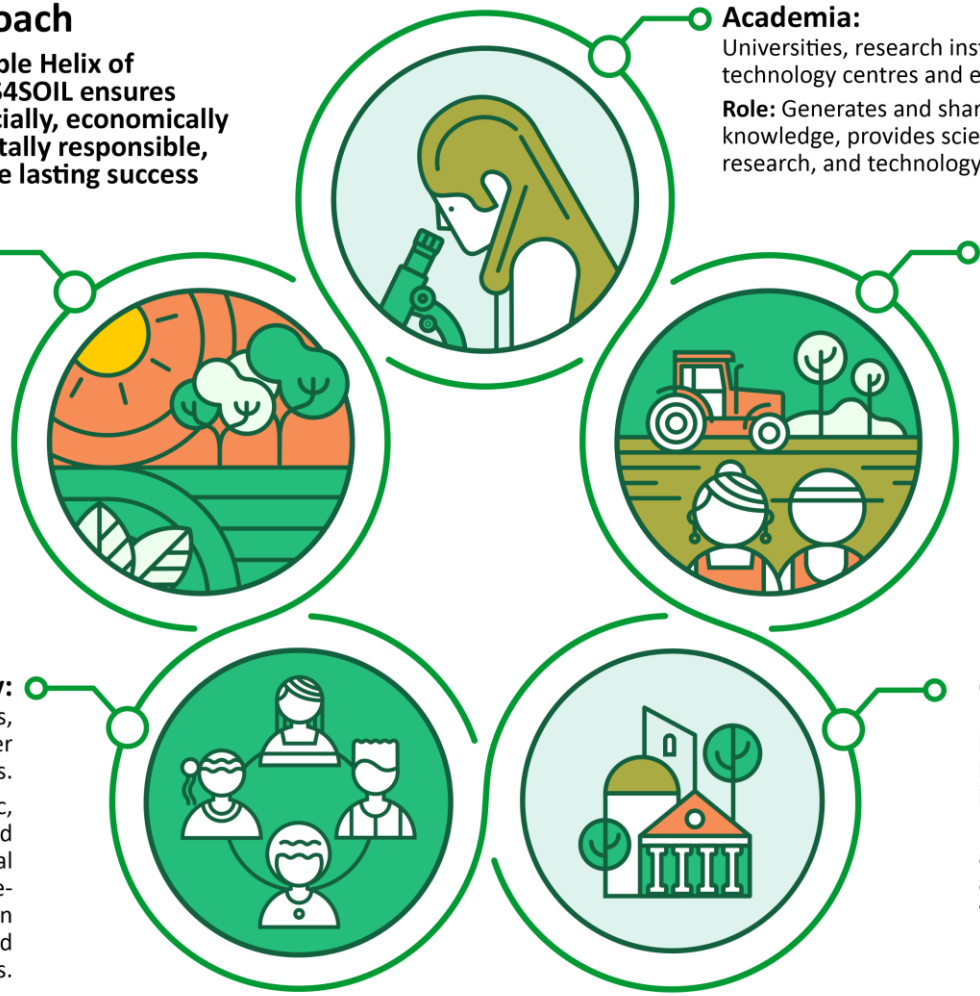
The Quintuple Helix of Innovation (QHI) in the project

Multi-actor approach

By adopting the Quintuple Helix of Innovation (QHI) TRAILS4SOIL ensures that innovations are socially, economically viable, and environmentally responsible, which is essential for the lasting success of soil health solutions.



Academia:
Universities, research institutions, technology centres and educational entities.

Role: Generates and shares scientific knowledge, provides scientific expertise, research, and technology development.

Natural Environment:

Role: Emphasises the integration of sustainable practices and ecological considerations. Ensures ecological concerns and sustainability are at the forefront of all project solutions.

Industry:
Farmers (practitioners), businesses in the agriculture sector (innovators and solution implementers).

Role: Develop and implement innovative solutions, test practical applications. Applies innovations in real-world scenarios, particularly in agricultural practices, and scales successful solutions.

Civil Society:
Citizens, local communities, NGOs, media and consumer associations.

Role: Engages public, communities, NGOs, and media to reflect societal needs, ensuring people-centred innovations, gain public support and spread awareness.

Government:
Public authorities, regulatory bodies and policymakers, and local, regional, national, and international governments.

Role: Offers policy support and regulatory frameworks, aligning project outcomes with national and EU policies.

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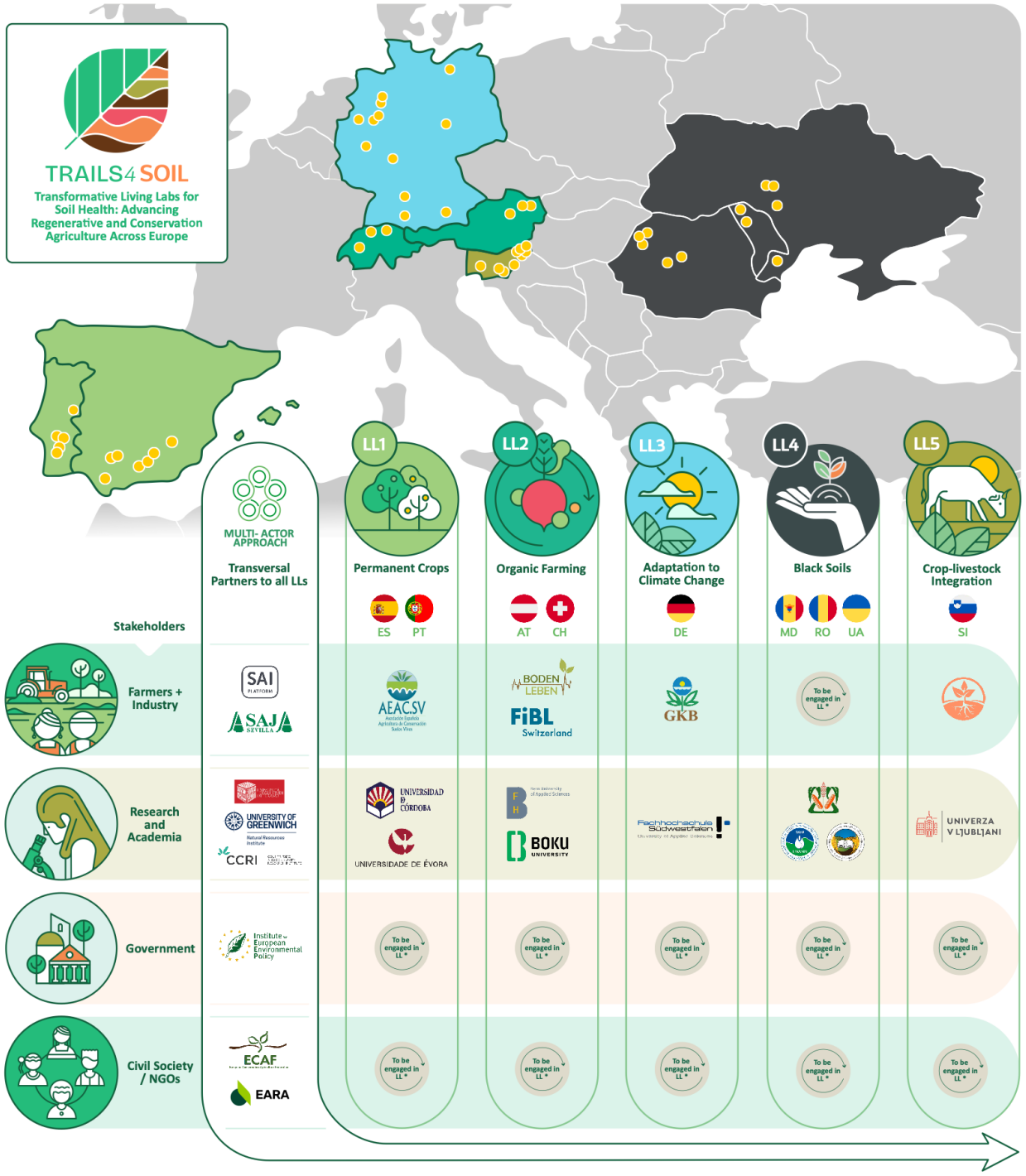

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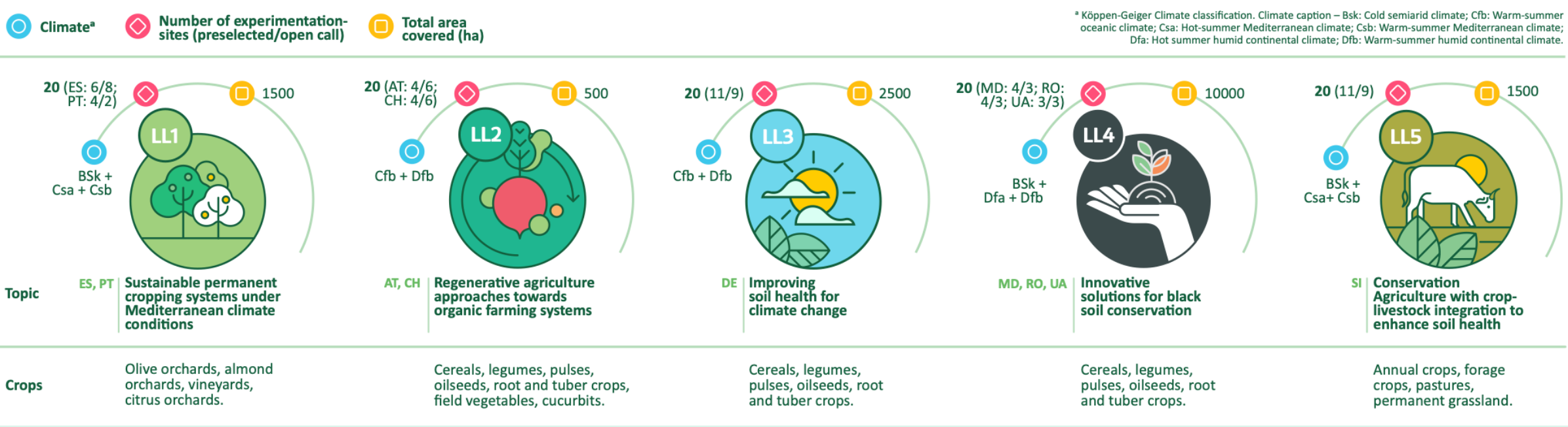

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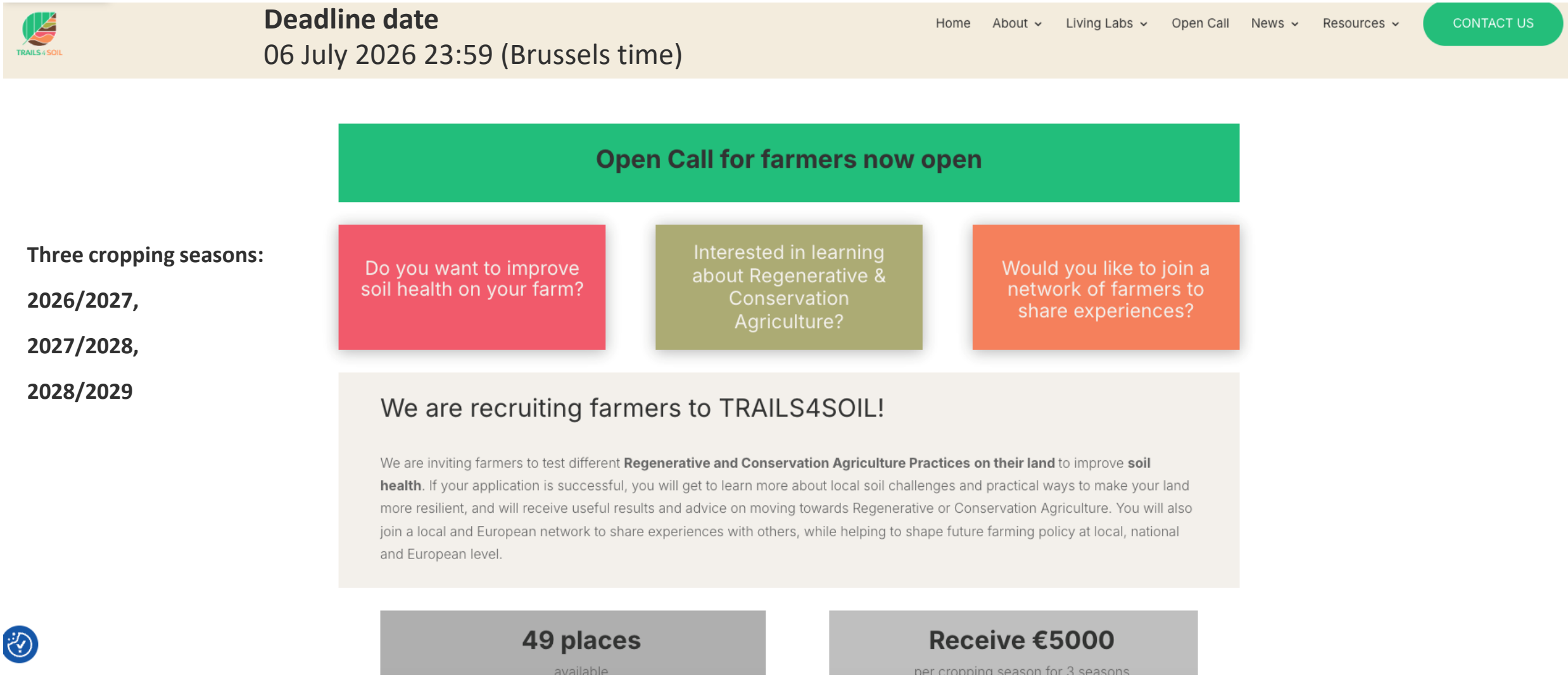
We are recruiting farmers to TRAILS4SOIL! - https://trails4soil.eu/open-call/

TRAILS4 SOIL

Deadline date
06 July 2026 23:59 (Brussels time)



Three cropping seasons:

2026/2027,

2027/2028,

2028/2029

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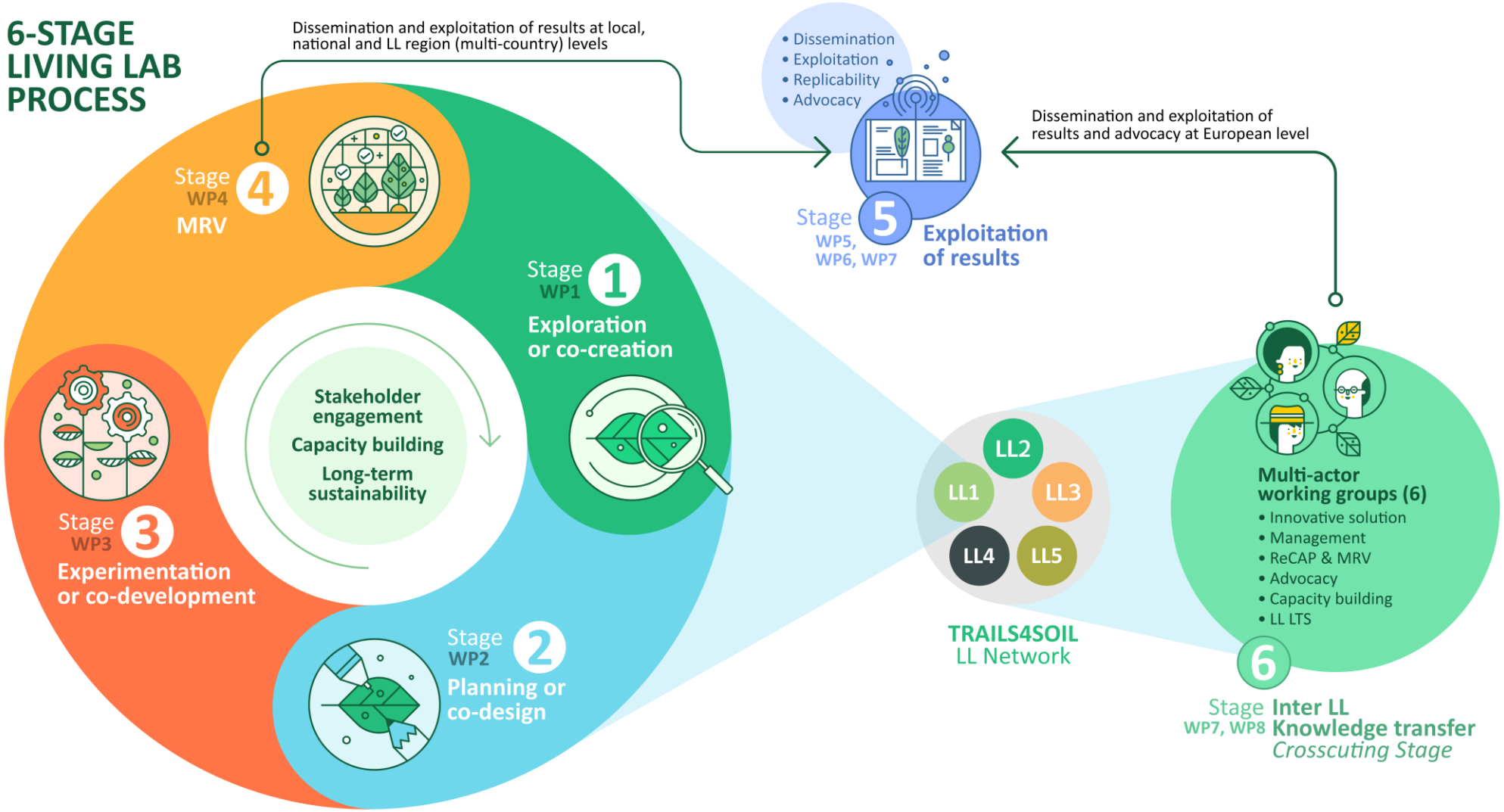
6-STAGE LIVING LAB PROCESS



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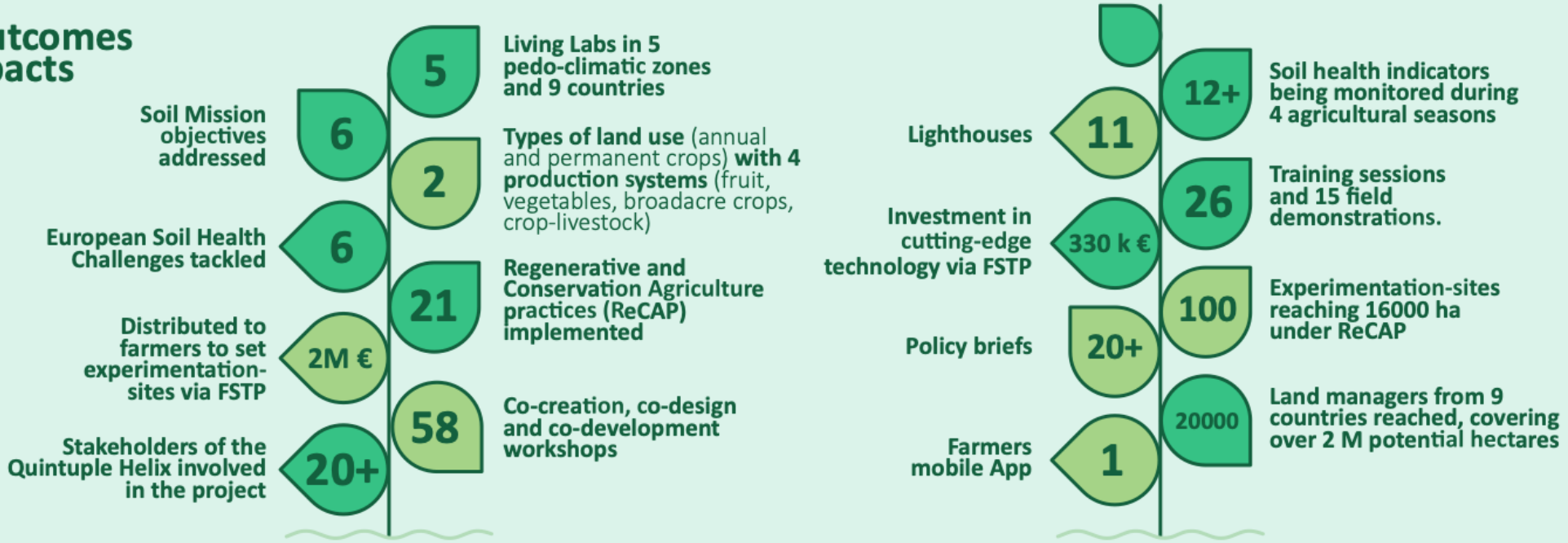
Main outcomes and impacts



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Carbon farming including

- *Conservation agriculture (a, d)*
- *Rewetting wetlands/peatlands, paludiculture (*
- *Minimum water table level during winter (a, c*
- *Appropriate management of residues, i.e. bur on residues (a, c, d)*
- *Establishment and maintenance of permanen*
- *Extensive use of permanent grassland (a, c, d*

European Green Deal

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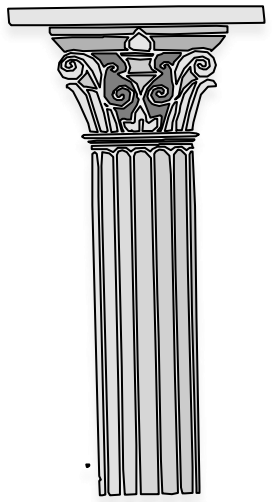
Conservation Agriculture

Greater services to the ecosystem and natural capital

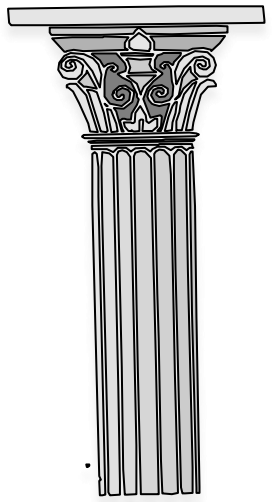
Soil protection and improved water quality

Climate change. Carbon sink

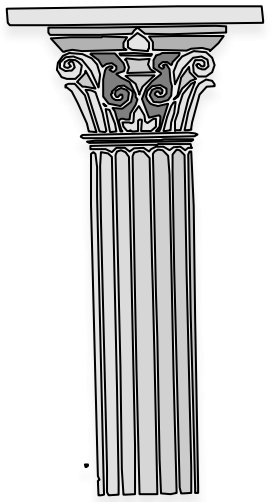
Adapted to different areas and production systems



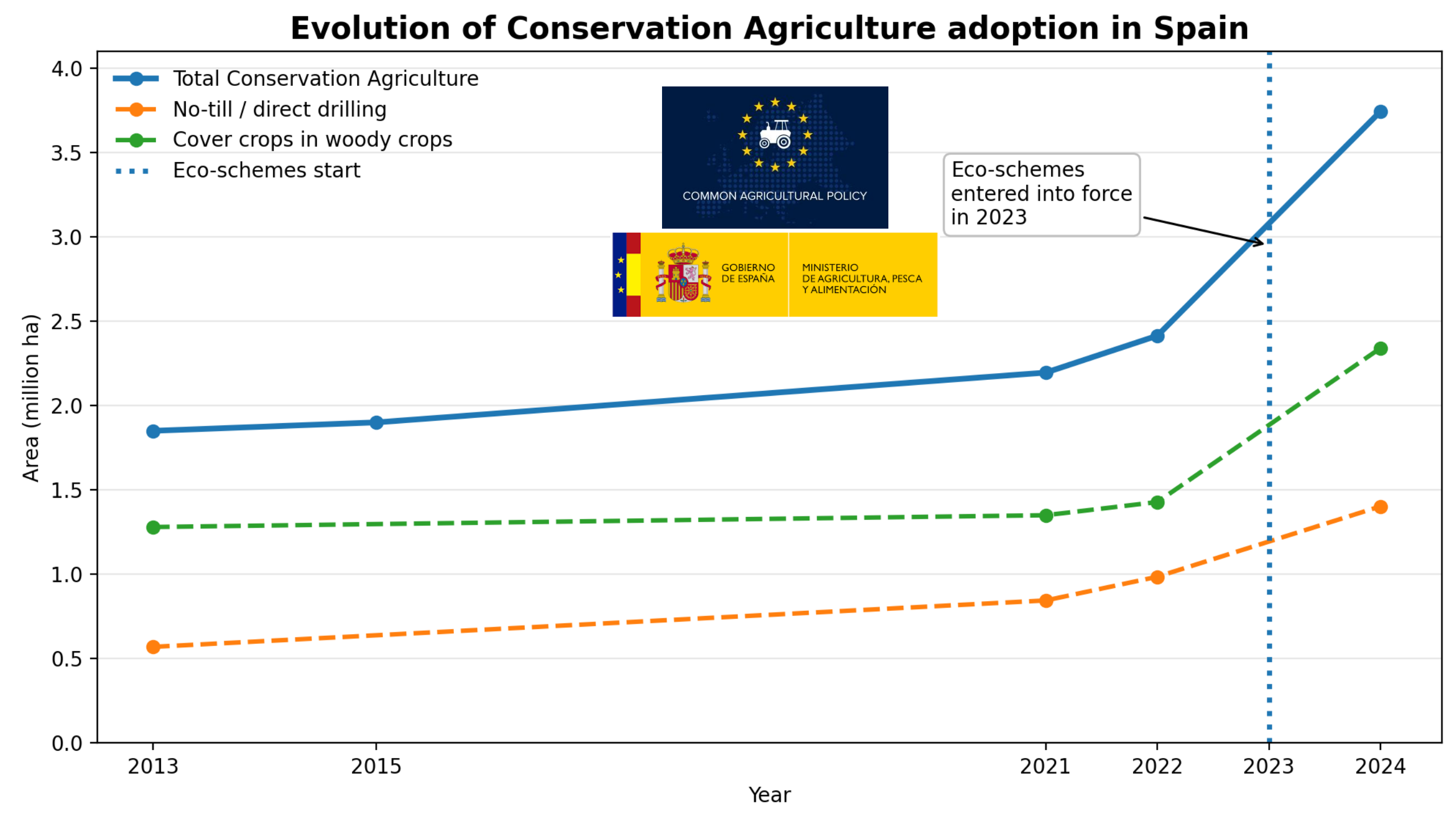
Minimum soil disturbance: no-till

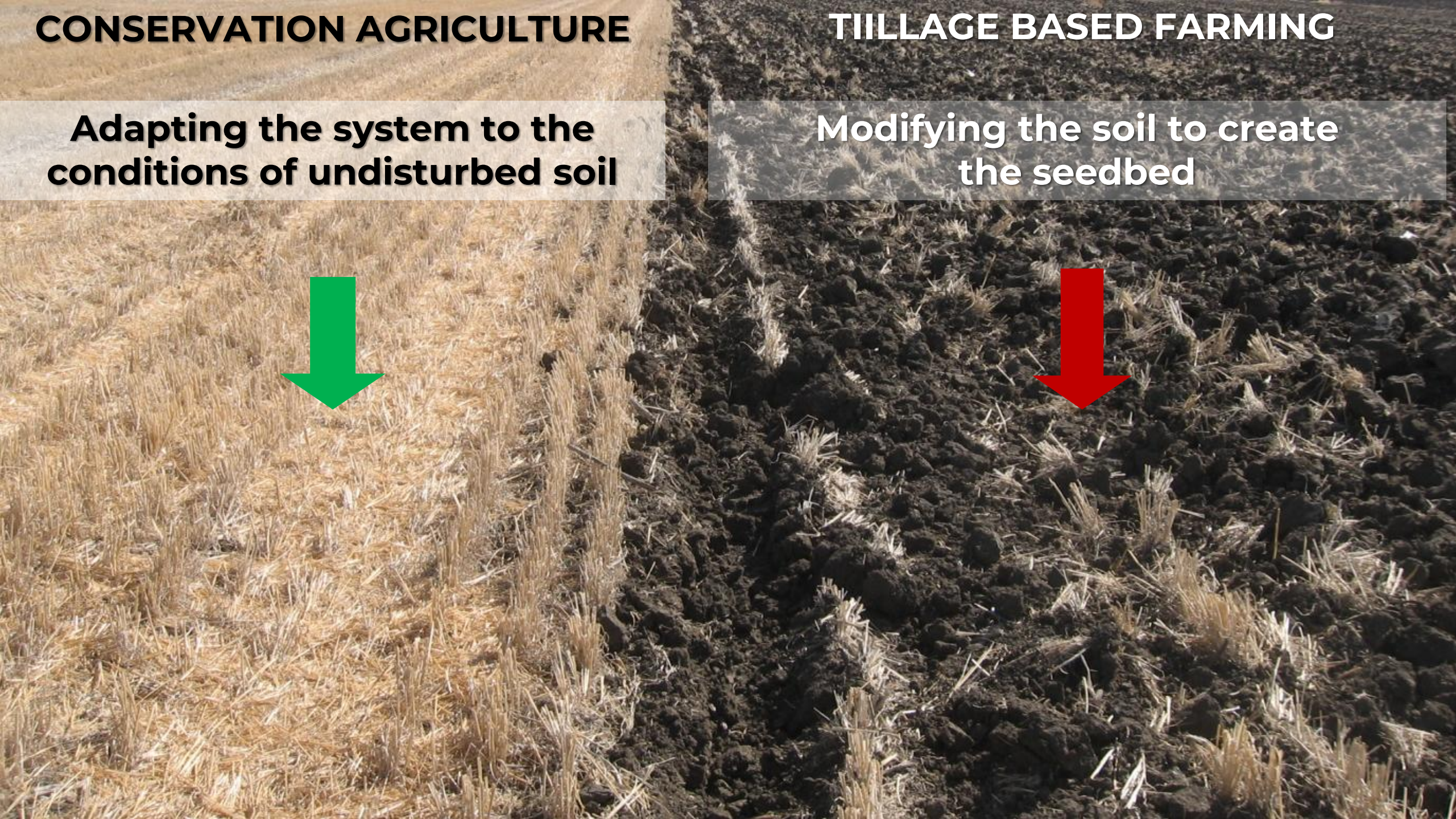


Permanent soil cover



Crop rotation


Evolution of Conservation Agriculture adoption in Spain
Total Conservation Agriculture
No-till / direct drilling
Cover crops in woody crops
Eco-schemes start
COMMON AGRICULTURAL POLICY
GOBIERNO DE ESPAÑA
MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN
Eco-schemes entered into force in 2023
Area (million ha)
Year
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
2013
2015
2021
2022
2023
2024


CONSERVATION AGRICULTURE
TIILLAGE BASED FARMING
Adapting the system to the conditions of undisturbed soil
Modifying the soil to create the seedbed

Undisturbing soil’s habitats

TRAILS#SOIL

No-tillage in Italy

No-tillage in Greece

No-tillage in France - Cover Crops

No-tillage in Germany

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ECAF
European Conservation Agriculture Federation

No-tillage in Spain

Groundcovers in permanent crops

Animal integration in farming, a real regenerative approach

Picture: Vicente Rodríguez

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Advancing Regenerative and Conservation Agriculture Across Europe

Together, with TRAILS4SOIL, we can turn knowledge into action—restoring soil health, strengthening resilient farming systems, and scaling Regenerative and Conservation Agriculture practices across Europe.

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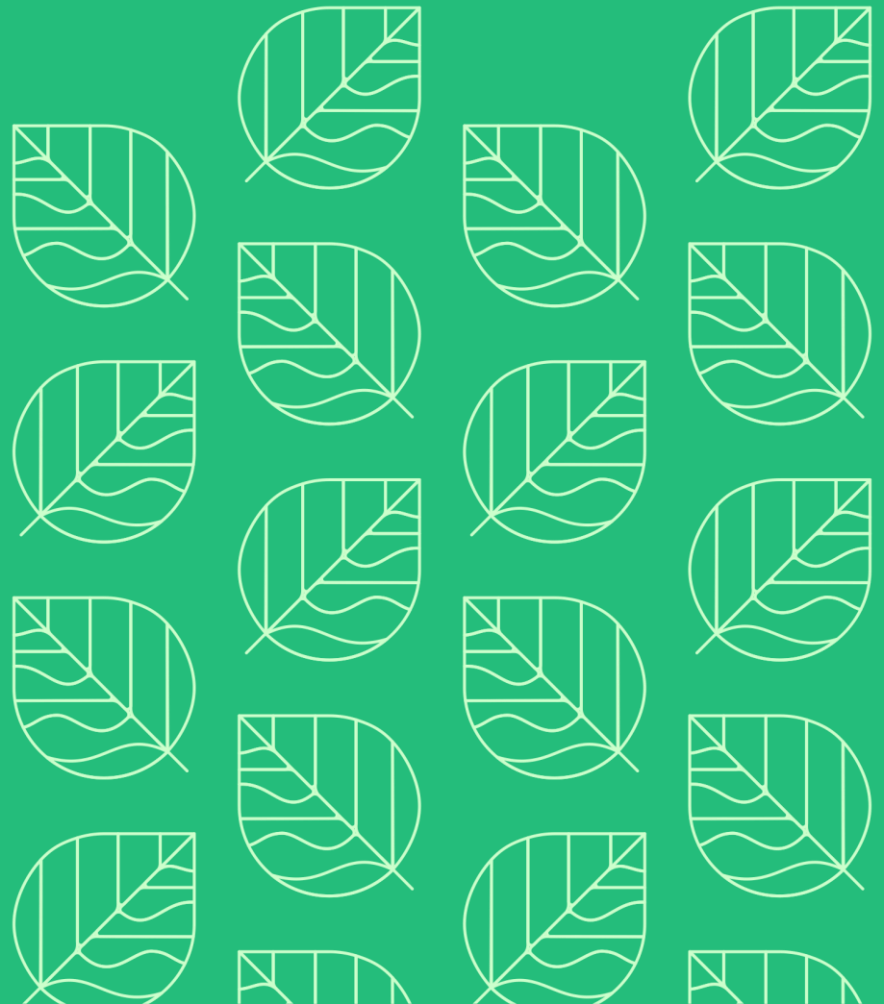

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THANK YOU!

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