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ClieNFarms
Climate Neutral Farms

Supporting the transition to climate-neutral and climate-resilient European farming

EU contribution:
€ 11 999 975
Overall Budget:
€ 13 639 536

48 months
1 January 2022

Testing and demonstrating systemic innovations in support of the F2F Strategy.
(LC-GD-6-1-2020)

33 partners & 14 European countries

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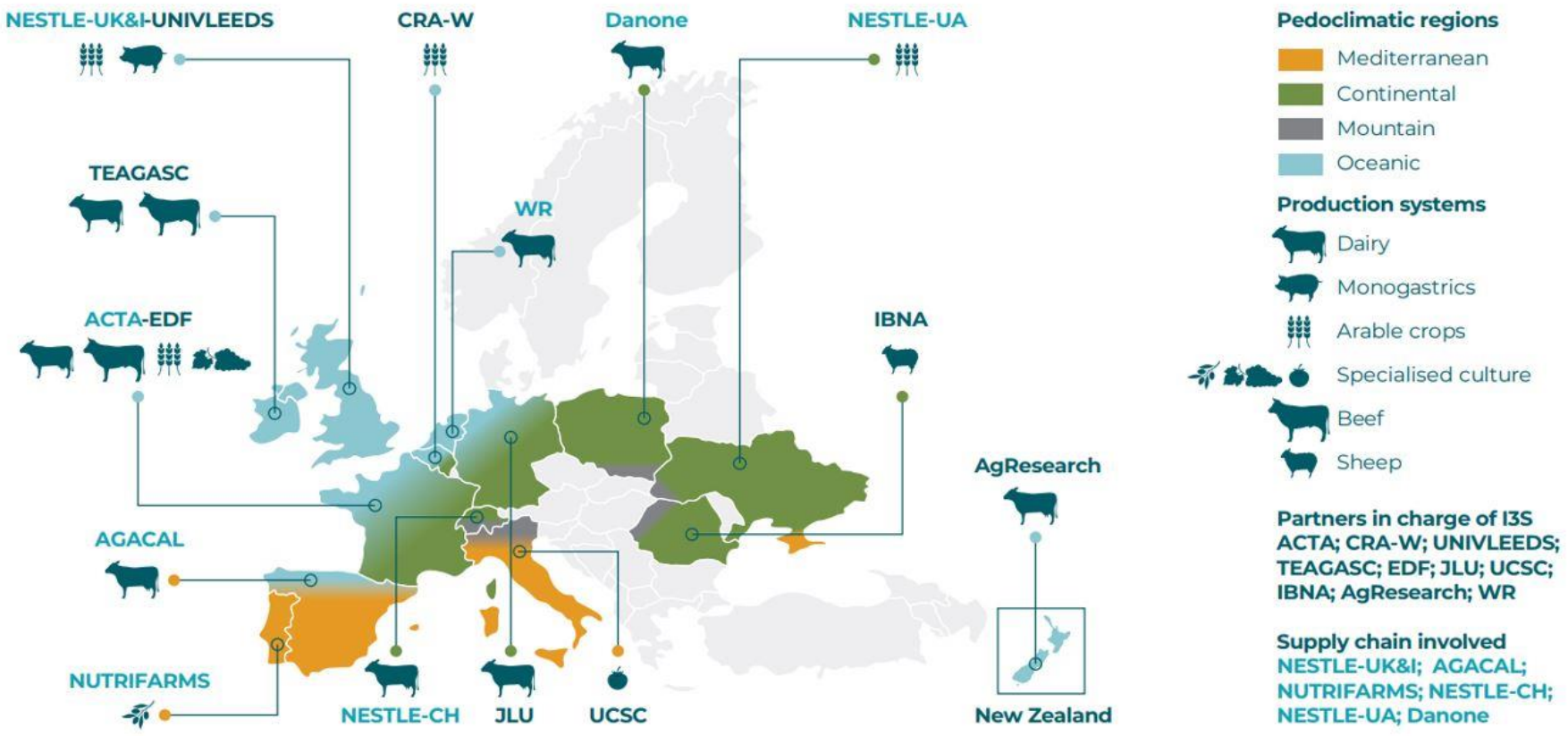
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036822

ClieNFarms is active in 13 European countries and 6 agrifood value chains



ClieNFarms
Climate Neutral Farms

Climate KIC is Europe’s leading climate innovation agency and community. Our role is to orchestrate suites of solutions and learnings to make systems change happen at pace and scale, working with countries, regions, cities, research, and businesses.

In ClieNFarms, we work on scaling approaches, policy, and EU-level collaboration.

Context

- In the EU, GHG emissions from agriculture have decreased by 7% between 2005 and 2023. **This is still insufficient to achieve a 55% reduction by 2030, or climate neutrality by 2050.**
- Agriculture contributes to climate change via **GHG emissions and changes in soil organic carbon (SOC)**, but also through the modification of **biogeochemical and biogeophysical processes**.
- While agriculture is a major driver of planetary boundaries exhaustion, it can also be **part of the solution** for better societal and ecosystemic health.

Irish ClieNFarms Team at a Beef Demonstration Event in Ballyvadin Co. Tipperary

Climate neutrality in agriculture and on farms

- Only a **holistic approach to farming**, i.e. considerate of all farm components and their interactions within and beyond farm gate, ensures the overall integrity of the farm-to-fork system and should be prioritized in policymaking.
- Policy and innovation in farming practices must go **beyond "neutrality in GHG budgets"** and equally strengthen the resilience of farms by addressing biodiversity loss, nutrient and water cycling, and soil health.
- Policy support should incentivize the adoption of holistic approaches to farming to ensure **long term food security**.

Insights from farmer interviews – what do farmers need?

- **Align Policy with On-Farm Innovation**. Support flexible, adaptive frameworks that integrate innovative practices like cover crops, biostimulants, agroforestry, and livestock integration, **ensuring they are eligible for funding and recognition under agri-environmental schemes**.
- **Enable Market and Knowledge Access**. Invest in platforms and programs that empower farmers to access premium markets (e.g., for grazing-based milk), share **knowledge peer-to-peer**, and **build trust in low-carbon methods** — reinforcing adoption through real incentives.
- **Ensure Consistent and Trustworthy Support**. Stabilize funding mechanisms and **align national incentives with sustainability goals**. Abrupt policy shifts erode trust and undermine farmer-led transition efforts — **long-term credibility** is key to accelerating climate-neutral farming.

How to scale up climate-smart, resilient agriculture practices (1/2)

- Balancing economic and agronomic viability for farmers:
  - Make validated technical knowledge on climate-smart, resilient practices available across all farming sectors; where possible, integrate cost/benefit analysis.
  - Support sustainable business models across the value chain (price premiums, etc).
- Empowering farmers as changemakers:
  - Support peer-to-peer learning and demo in the field
  - Involve farmers in MRV design and implementation
  - Equip farmers for collaboration

Cross-Border Meeting in Germany to Explore Sustainable Organic Dairy Systems

How to scale up climate-smart, resilient agriculture practices (2/2)

- Addressing barriers to adoption
  - There is no one size-fits-all solution in climate-smart, resilient farming.
  - Public and private incentives need to strike the right balance between being prescriptive regarding practices and focusing on end-goals.
- Collaboration for systemic change
  - Value creation and risk-taking must be distributed fairly in a system where stakeholders can trust each other.
  - Collaboration at value chain and landscape level is essential at each step of the process: equip stakeholders with the right tools to understand their system, define a common vision, and act together.

Demo Day on the French South-West I3S' Demonstration Farm

Monitoring, reporting, verification (MRV): adopting a fit-for-purpose approach (1/2)

Different MRV tools (farm tools, process-based models, etc) can serve different purposes:

- Product evaluation
  - E.g. to inform a company's emission reduction target
- Assessment of policy targets
  - Such as total agriculture emission reduction for the EU
- Assessment of a farmer's emission levels
  - E.g. in comparison with other farmers in the area.

Not all results are comparable. Choosing the right tool for the right purpose and being aware of differences in methodologies is crucial.

Monitoring, reporting, verification (MRV): adopting a fit-for-purpose approach (2/2)

- Neither farm tools nor models can be used alone. Error and uncertainty would be too high, especially for SOC and non-CO2 GHG measurements.
  - Local measurements cannot (yet) be replaced by generic datasets, models, or remote sensing.
  - In ideal cases, tools and models can reduce the number of samples required.
- Tools and models are further challenged when it comes to integrating practices such as intercropping or the use of compost or biochar (which are often used in organic farming).
  - This may result in biased figures when comparing the climate impact of organic vs conventional farms or products.

Thank you for your attention!

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