



ClieNFarms
Climate Neutral Farms

Collaborating to Drive Climate-Neutral Farming – the ClieNFarms Initiative

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Cool Farm Alliance annual meeting, 19/05/2022

19/05/2022



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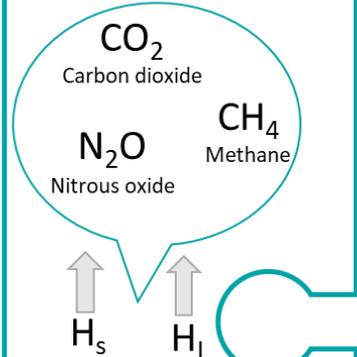
Project overview

- Climate Neutral Farms (ClieNFarms)
- Coordinated by INRAE (France)
- EC grant of 12 M€
- 33 partners including 4 SMEs and 9 industrial partners
- 4 years: 2022-2025
- Objective: co-develop and upscale systemic locally relevant solutions to reach climate neutral and climate resilient sustainable farms across Europe

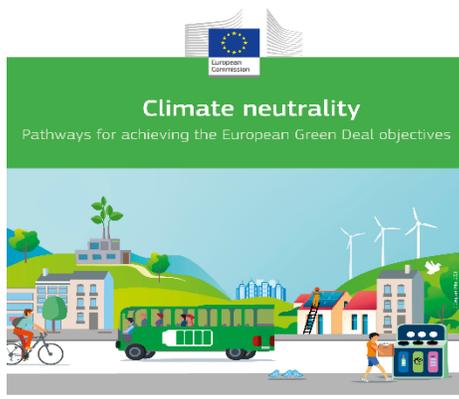


Agriculture is part of the problem, but also part of the solution

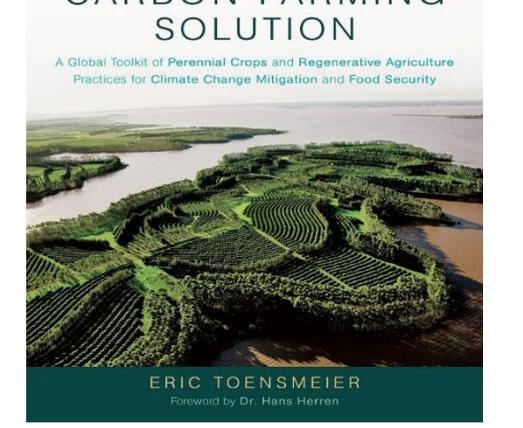
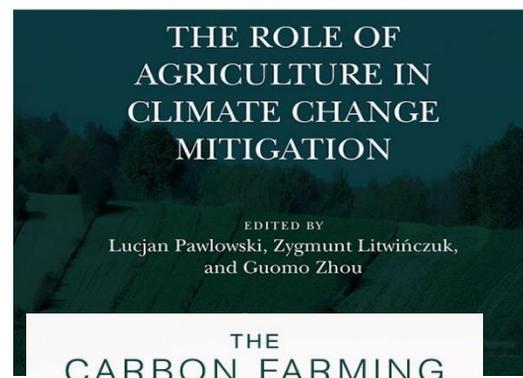
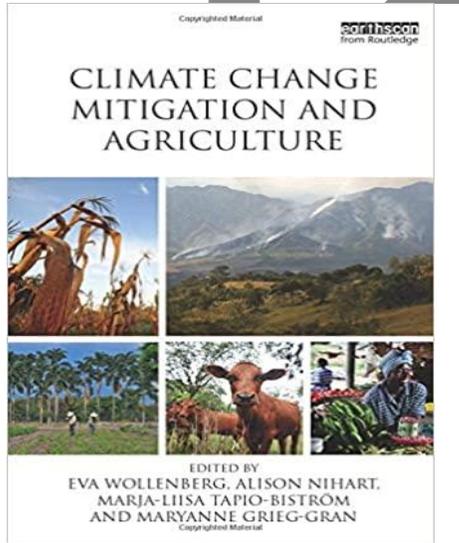
Agriculture : 10.3% of EU's GHG emissions



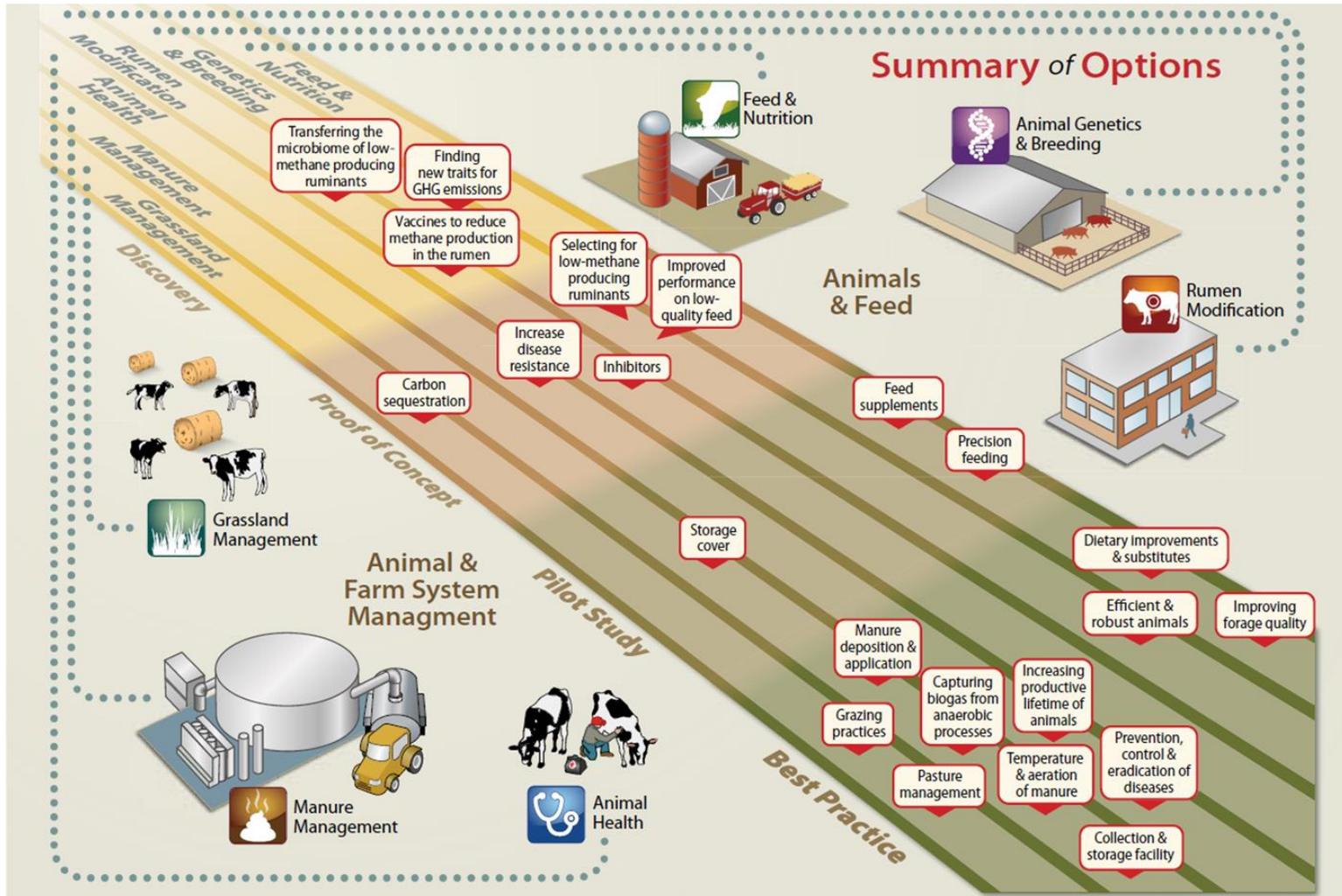
- Enteric fermentation
- Manure left on pasture
- Synthetic fertilizers
- Manure applied to soils
- Manure management & housing
- Crop residues



The European Union is committed to becoming climate neutral by 2050. This transition is essential if we want to avoid catastrophic climate change. Strategic decisions to invest, fund and implement technologies to green our economy, create energy and transport, a more efficient industrial base, and create healthy food systems will be at the heart of achieving this goal. The 10 research projects featured in this report identify how to develop a range of tools that can help to assess the benefits, costs, risks and trade-offs of climate neutrality strategies. This provides a solid backdrop on which policymakers, business and society can make informed choices about the best route to a greener, cleaner and more equitable future for Europe. To access the full pack please go to: ec.europa.eu/transport11844

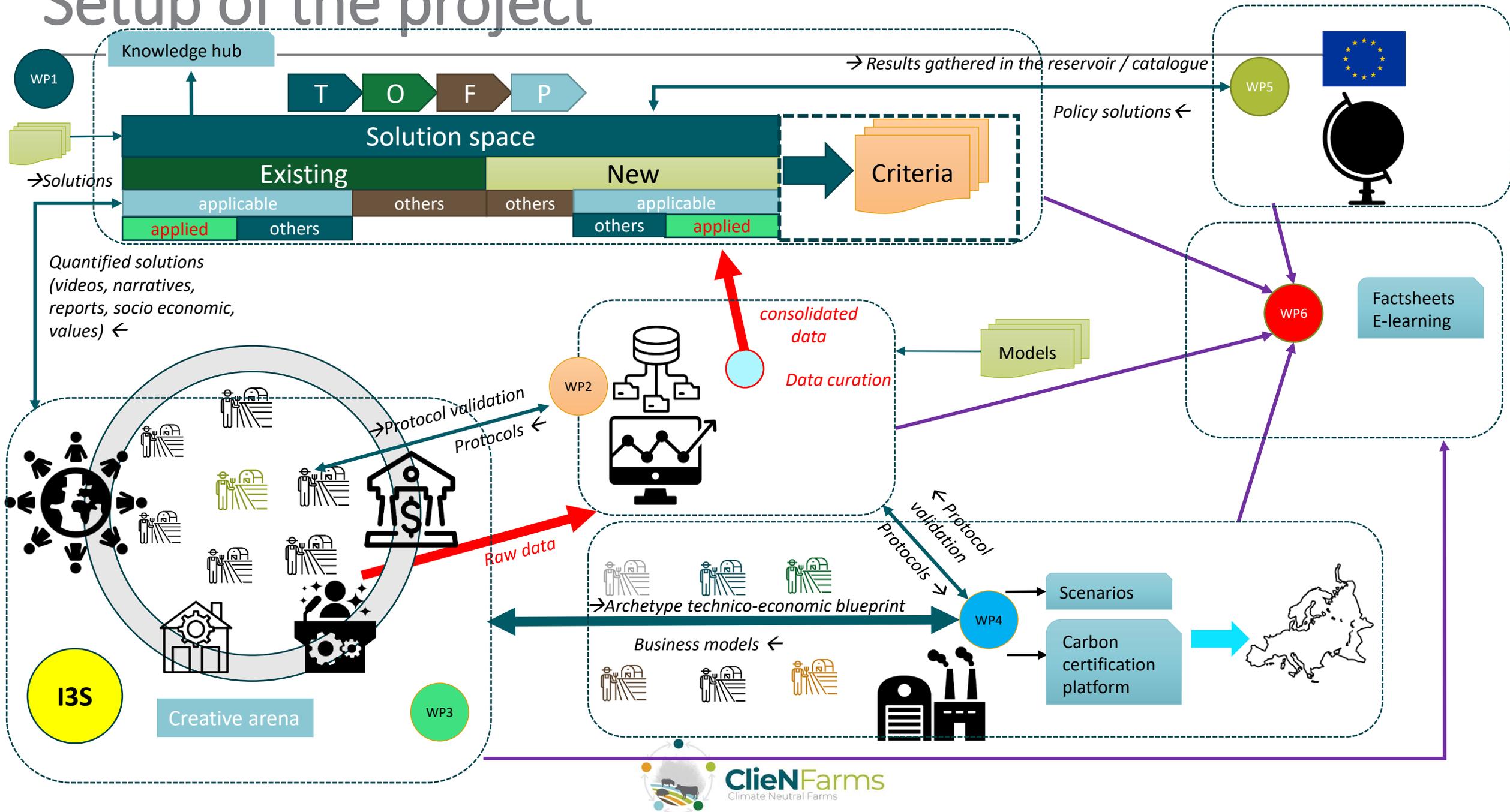


Mitigation practices

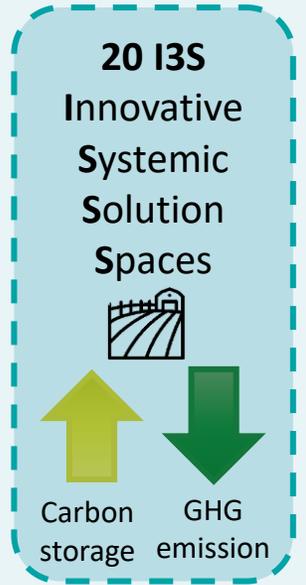
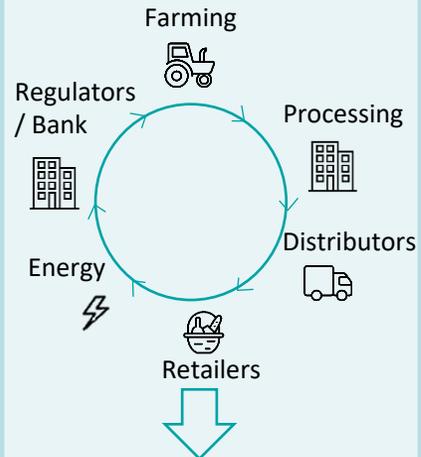
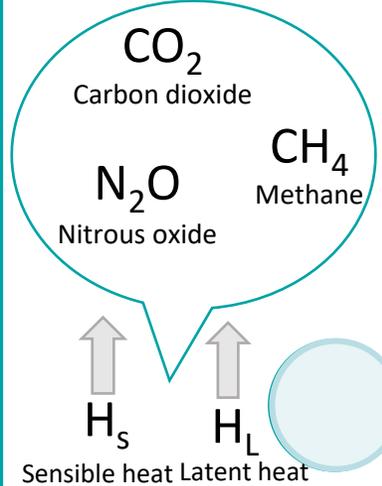


(Source: GRA/SAI, 2015)

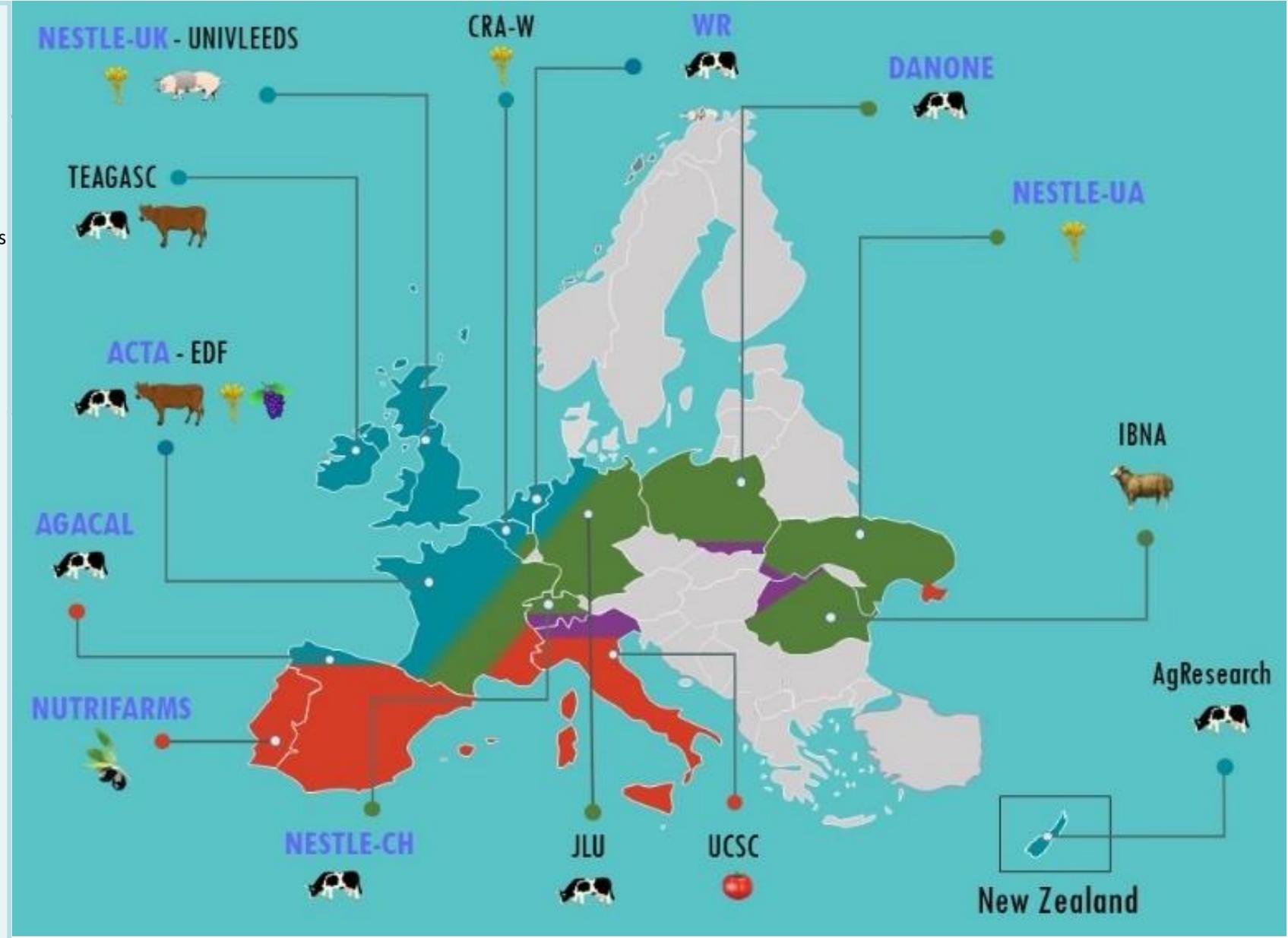
Setup of the project



Agriculture : 10.3% of EU's GHG emissions



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DEVELOPING & DEPLOYING I3S

WP1 - I3S European Solution Space

I3S network architecture and management rules

Baseline of the carbon footprint of I3S

Knowledge reservoir and catalogue of solutions

WP2 - I3S Methodology Development

Multi-criteria analyses and theoretical framework

Catalogue of strengths and weaknesses of models

Toolkit "prototype" evaluation & subsequent "best management practice(s)"

WP3 - I3S Farm Deployment

Demonstration farms and I3S for each farm

Action plans for each Lead Commercial Farm

Quantification of the impact of I3S to achieve climate neutrality

Barriers to adoption/uptake of technologies by farmers

WP4 - Scaling-up impacts of I3S

Holistic scaling approach for I3S

Business models for sourcing district transformation

Carbon credit platform

EU wide scenarios for climate neutral farms

WP5 – Synergies with other EU projects, policies and initiatives

Cooperation with Commission services

Synergies with other Green Deal projects

International Advisory Board

WP6 communication, dissemination, training and exploitation

Website, social medias, newsletter

Activating the community of production chain actors

Dissemination of project results

Training activities & capacity building

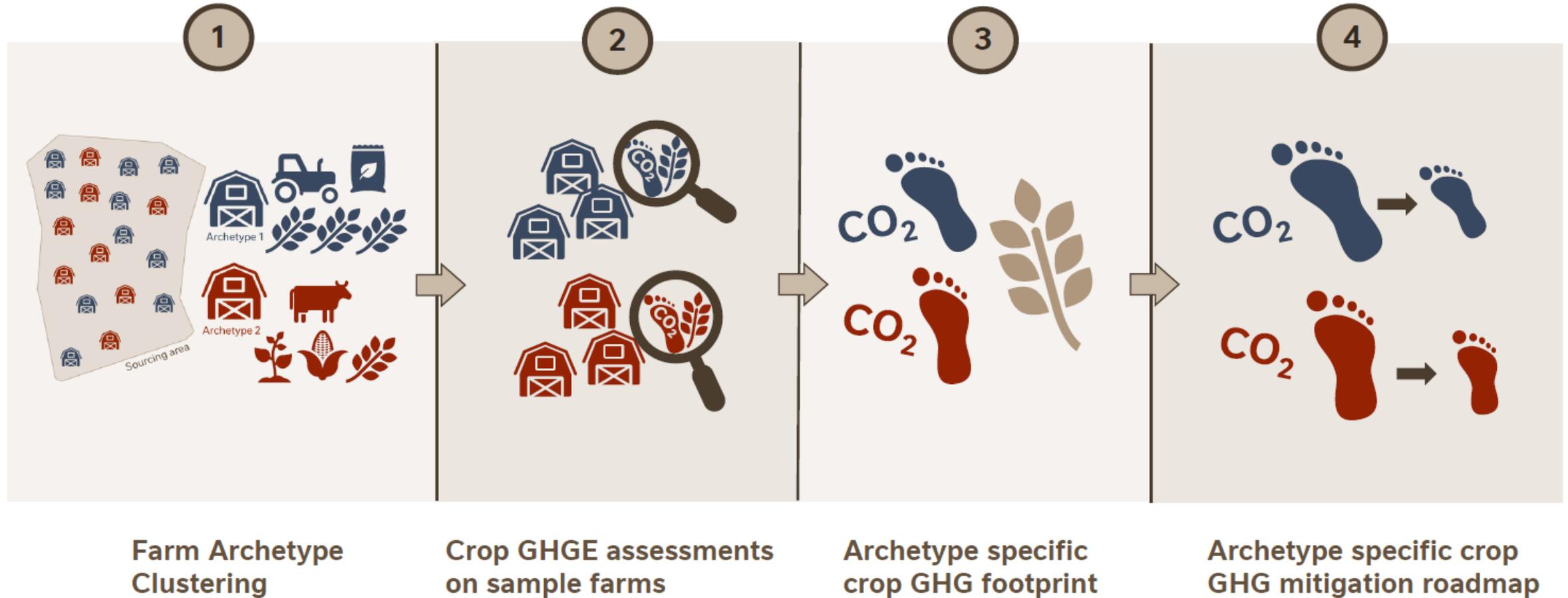
Exploitation plan

WP7 - PROJECT MANAGEMENT

DELIVERING IMPACTS



Approach for upscaling to sourcing district



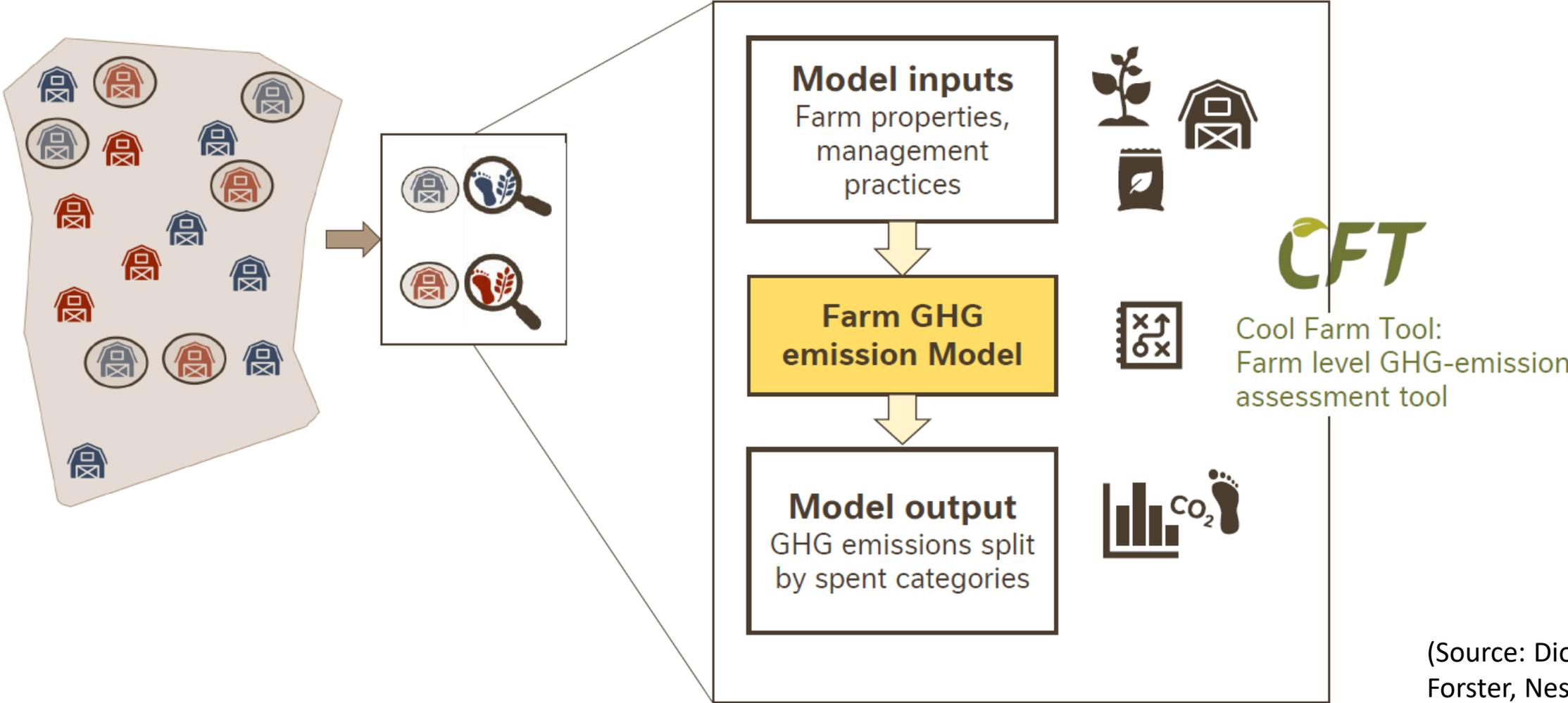
(Source: Dionys Forster, Nestle)

Archetype aggregation



(Source: Dionys Forster, Nestle)

GHG emission assessment sample farms

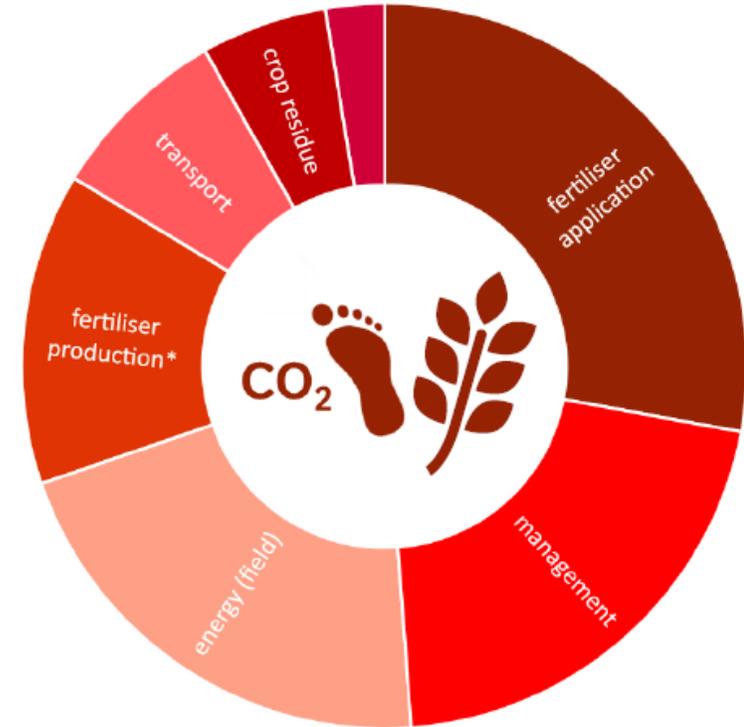
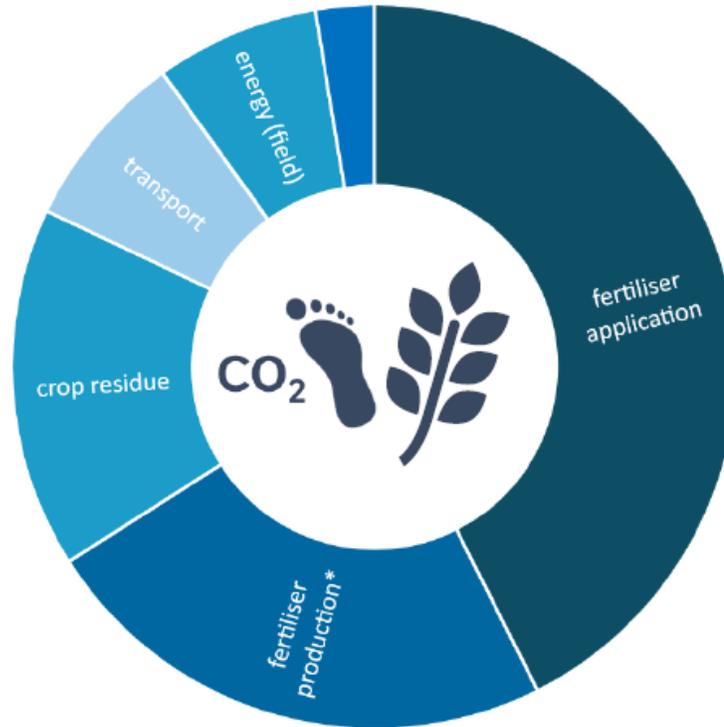


(Source: Dionys Forster, Nestle)

GHG emission from different categories

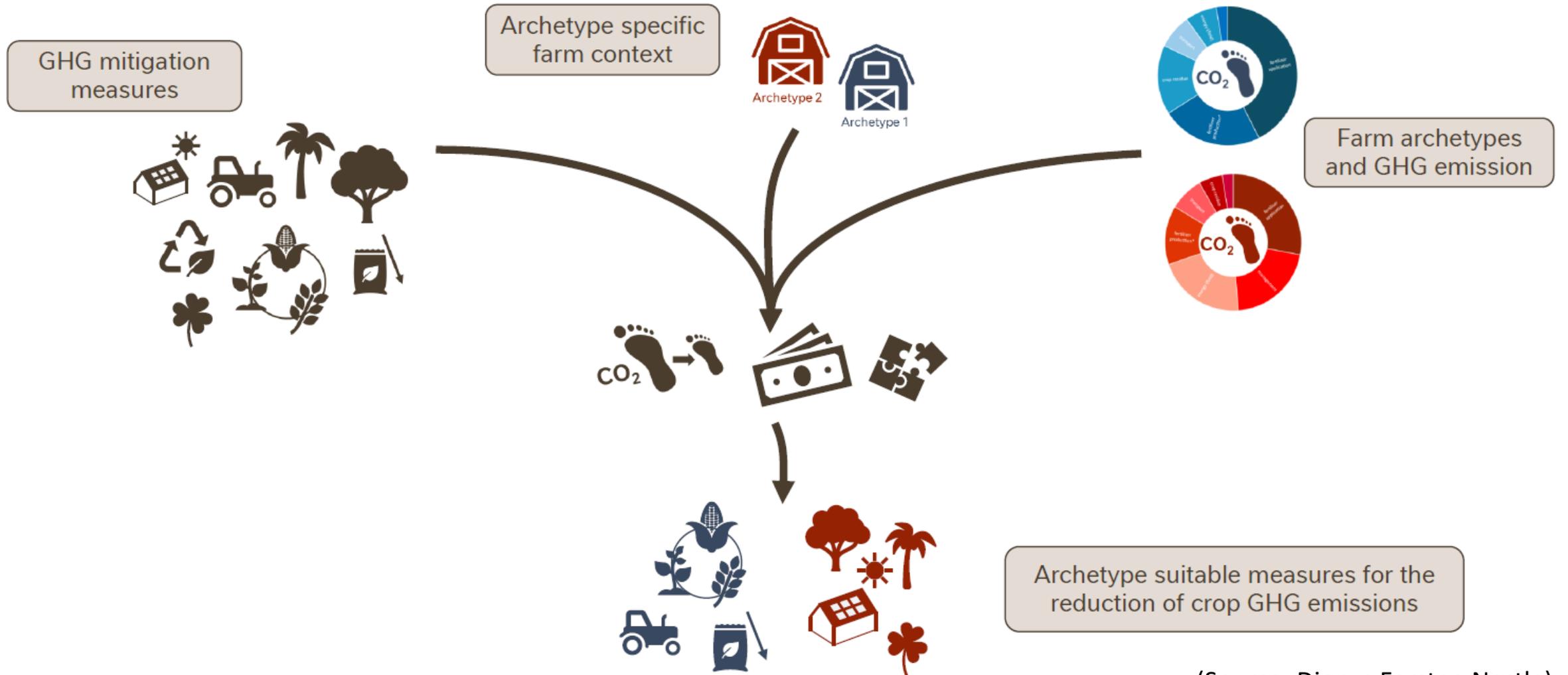
GHG spent categories

- Energy (facility)
- Energy (field)
- Fertilizer production
- Fertilizer application
- Management
 - Land use change
 - Tillage
 - Cover crops
 - Trees
- Paddy methane
- Pesticides
- Crop residue
- Transport
- Wastewater



(Source: Dionys Forster, Nestle)

Archetypes specific GHG mitigation roadmap



(Source: Dionys Forster, Nestle)

Archetypes specific GHG mitigation roadmap



Archetype 1

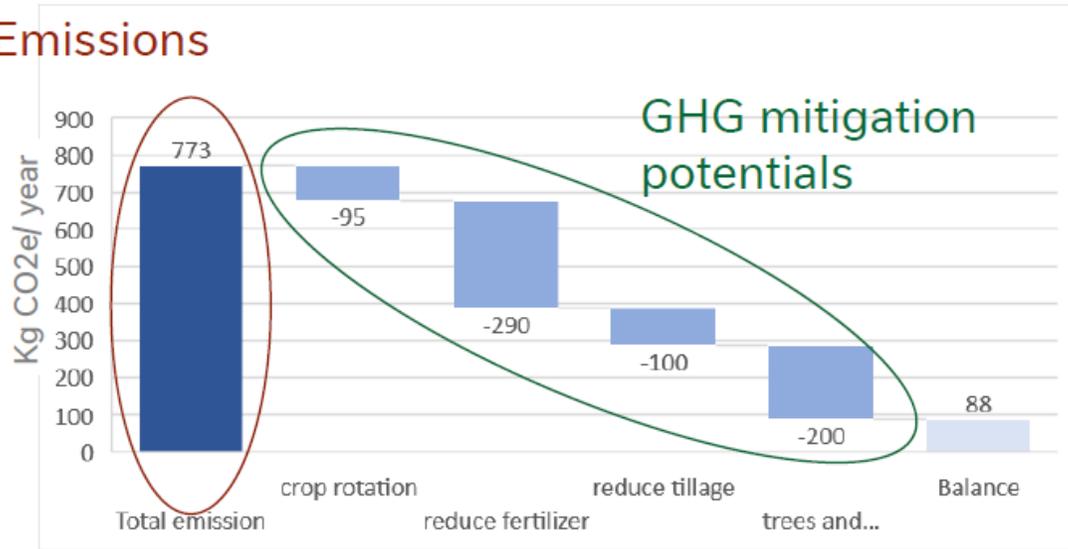
- Crop rotation
- Optimization of fertilizer application
- Reduced till
- Hedgerows



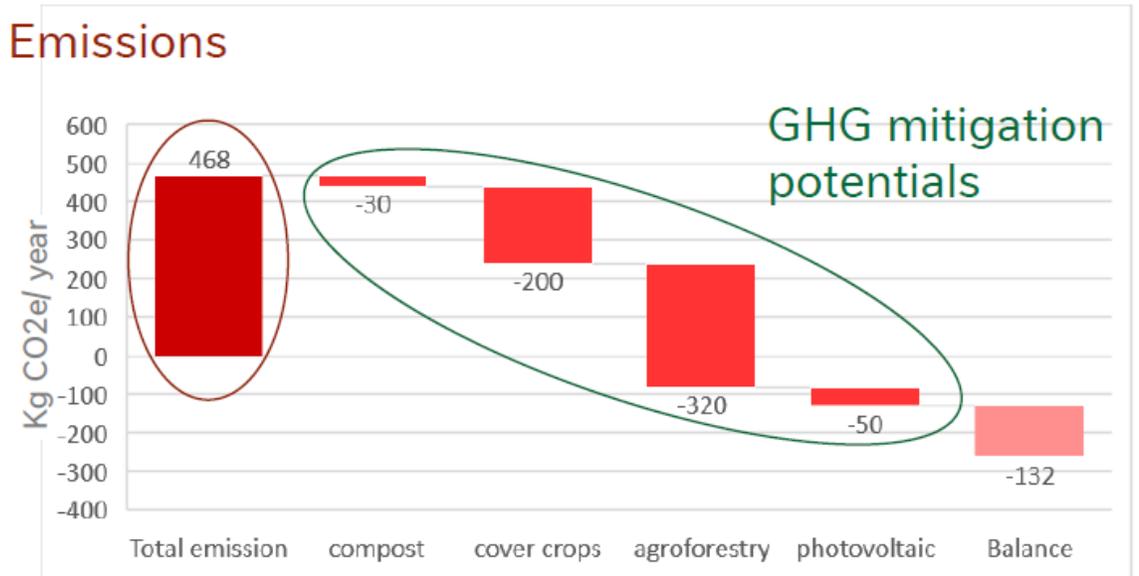
Archetype 2

- Compost & biochar
- Cover crops
- Agroforestry
- Solar panels

Emissions

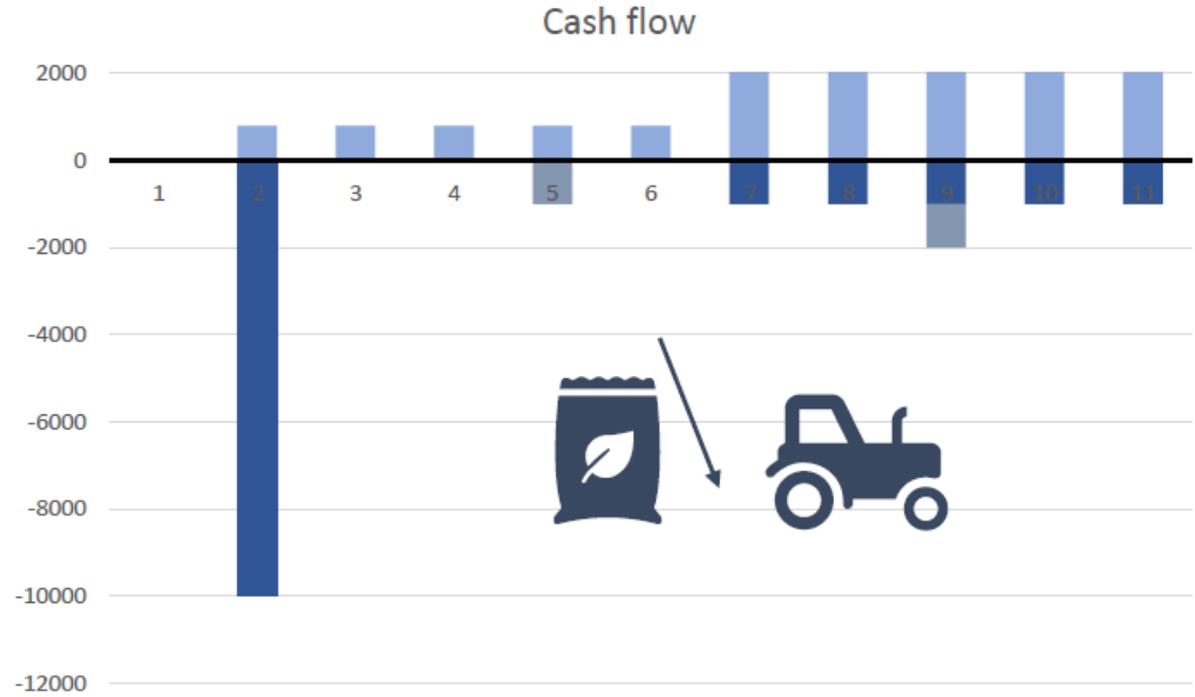
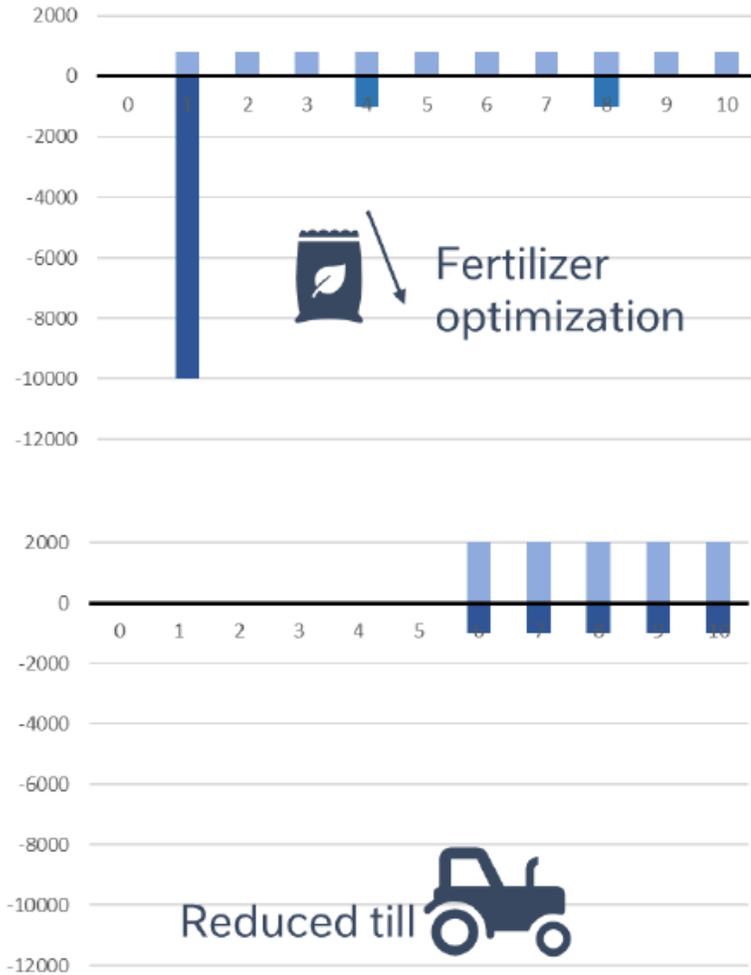


Emissions



(Source: Dionys Forster, Nestle)

Archetypes specific GHG mitigation roadmap



Involved I3S in upscaling to sourcing districts

Country	Farming system	Supply chain partner	Supporting partners
United Kingdom	Arable	Nestle	GWCT
France	Arable	Nestle	Terres Inovia
Switzerland	Dairy	Nestle	FIBL and BFH
Ukraine	Arable	Nestle	FIBL and BFH
France	Dairy	Danone	ACTA
Poland	Dairy/mixed	Danone	
Spain	Dairy	Danone	AGACAL
Netherlands	Dairy	FrieslandCampina	WR
Portugal	Olive oil	NutriFarms	Consulai
France	Beef	<i>Sicarev and Feder</i>	ACTA

Follow up

- Local intervention pathways and corresponding costs for 10 supply chains
- Guide on business models and promising financial and de-risking instruments for upscaling
- GHG reduction and removal platform 
- EU-wide scenario analysis of pathways towards climate neutral farms
- Disseminate knowledge and collaboration with other companies

Thank you for your
attention!

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