

3-days European Meeting

Carbon Farming: environmental sustainability of
cattle farming, mitigation actions and carbon credit
market model

Verona, October 14th - Luciano Migliorati
Camera di commercio Industria Artigianato Agricoltura

*CREA Centro di Ricerca Zootecnia e
acquacoltura - Lodi*

LIFE Carbon Farming

Faced with the challenge of climate change, agriculture has a certain responsibility in terms of emissions at a global level. To respond to the growing attention of cattle breeders towards environmental sustainability, the "**BEEF CARBON - CARBON DAIRY**" projects have been proposed at a European level, now **LIFE CARBON FARMING** which involves **700 farmers in six European countries**.



- 1 October 2021 – 1 October 2027
- Coordinating beneficiary: Institut de l'Elevage (IDELE)
- 32 Associated beneficiaries Budget: 6.660,72 € of which 55% Co-financed by the EC
- 6 countries involved (France-Idele, Ireland-Teagasc, Spain-Asoprovac, Italy-CREA, Belgium-University of Liège and Germany-Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB) of the University of Berlin
- Partner italiani: CREA, UNICARVE, ASPROCARNE, AIA e CRPA

AGENDA OF THE 3 DAYS



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14:00-17:00 Progress of the project, initiatives and testimony of innovative European breeders, buyers

- **Presentation of the LIFE CARBON FARMING project** - *Anaïs L'Hôte, Idele*
- **Carbon farming: regulatory framework, state of the art and future perspectives in agriculture** - *Ilaria Falconi, CREA-PB Council for Agricultural Research and Economics - Policy and Bioeconomy Research Center*
- **The carbon credit market: state of the art and future perspectives** - *Saverio Maluccio, CREA-PB Council for Agricultural Research and Economics - Policy and Bioeconomy Research Center*
- **Sustainability assessment in beef cattle farms** - *Sara Carè, CREA-PB Council for Agricultural Research and Economics - Policy and Bioeconomy Research Center - Lorena Giglio, CRPA Research Centre on Animal Production*
- **Farms, audits, and action plans in German dairy farms** - *Mohammadmahdi Seyed, Leibniz Institute for Agricultural Engineering and Bioeconomy*
- **Role of beef and dairy cattle associations for environmental sustainability** - *Giuliano Marchesin, Director and Andrea Scarabello, UNICARVE Technician - Simone Mellano, ASPROCARNE Director - Riccardo Negrini, Technical Director A.I.A. - Italian Breeders Association*
- **Livestock and tannery: hypothesis of intersectoral cooperation to reduce greenhouse gas emissions** - *Guido Zilli, Gruppo Mastrotto SPA*

20:00 Dinner at Ristorante Locandina Cappello, Via Cappello 16, 37121 Verona

8:00 Departure from Piazzale XXV Aprile/ Via Andrea Palladio – Verona

Morning: Visit of a beef farm near Rovigo (Veneto):

- **09:30-11:00 Mea Farm** - Via Mea, 12, 45014 Porto Viro (Rovigo): beef cattle with fattening production
- **11:30-13:00 Mezzanato Farm** - Via Po Vecchio 25, 45014 Porto Viro (Rovigo): beef cattle with fattening production

13:30 Lunch at Ristorante Cappello, Via Santa Teresa 7, 45010, Rosolina (Rovigo)

- **15:00-16:30** Visit of a beef farm near Rovigo (Veneto)

Cà Negra Farm - Via Ca' Negra 2757, 45017 Loreo (Rovigo): beef cattle with closed cycle cow-calf line and beef cattle with fattening production

20:30 Dinner at Ristorante Greppia, Vicolo Samaritana 3, 37121 Verona

7:00 Departure from Piazzale XXV Aprile/ Via Andrea Palladio - Verona

Morning: Visit of a dairy farm near Reggio Emilia (Emilia Romagna)

- **09:00-10:30 Fondo Albarossa Società Agricola Di Salati Vincenzo E C.** - Via Grisendi 35, 42043 Gattatico (Reggio Emilia): dairy farm with milk production intended for cheese processing
- **11.00-12:30 Ronchi Energy Farm** - Via Ronchi S. Prospero, 42015 Correggio (Reggio Emilia): dairy farm with milk production intended for cheese processing

12:30-14:00 Return in Verona and Free Lunch

14:30-17:30 Working group meeting with Chloé Weeger, at Hotel Verona, Corso Porta Nuova 47/49, 37122 Verona, end of event and closing of the activity

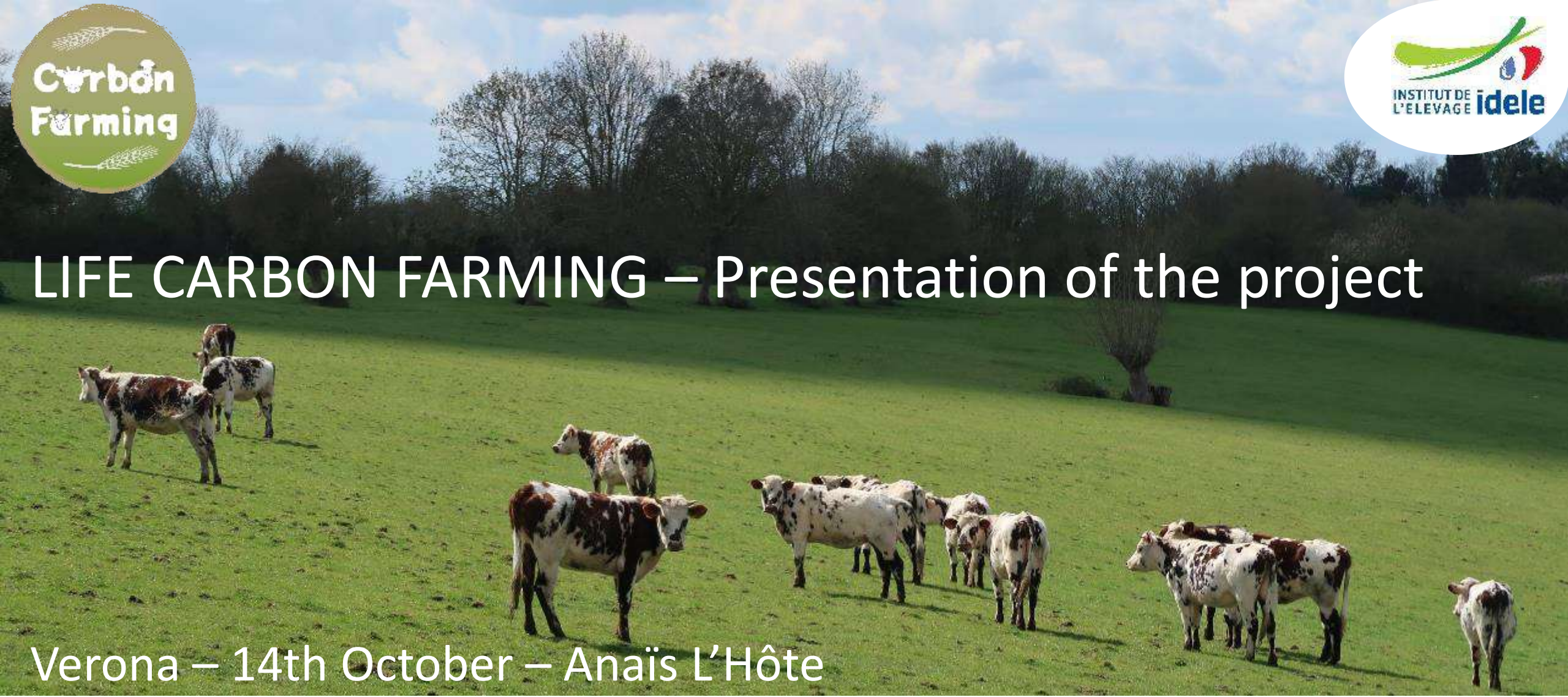
Thank you for you attention



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LIFE CARBON FARMING – Presentation of the project



Verona – 14th October – Anaïs L'Hôte



 Co-funded by the European Union

This project is supported by the European Union's LIFE programme.



OBJECTIVES



 Co-funded by the European Union

This project is supported by the European Union's LIFE programme.

Objectives of the project



- Involving 700 farmers and training 78 advisors
- Reducing by 15% the carbon footprint of agricultural products in 6 years in 700 farms
- Building a common result-based rewarding mechanism
- Assessing the economic impact of low carbon projects



This project is supported by the European Union's LIFE programme.

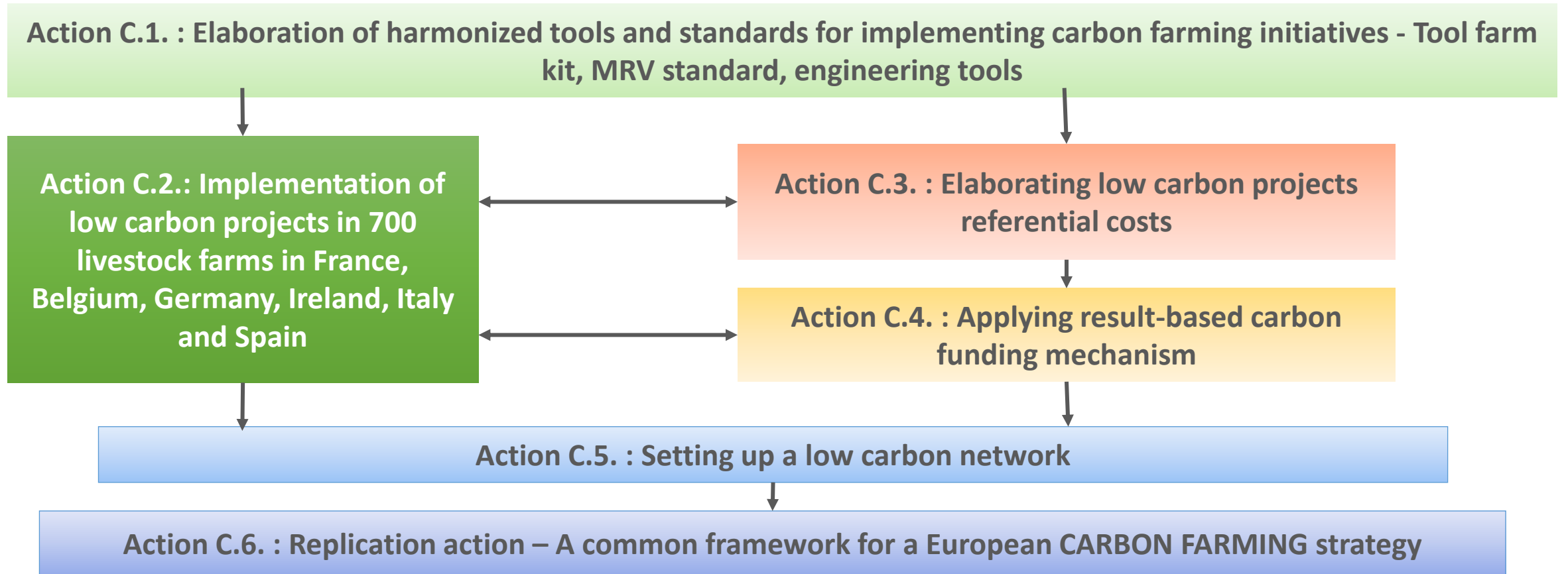


ACTIONS



This project is supported by the European Union's LIFE programme.

Technical actions of the project



 Co-funded by the European Union

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Action C.1. Sustainability grid

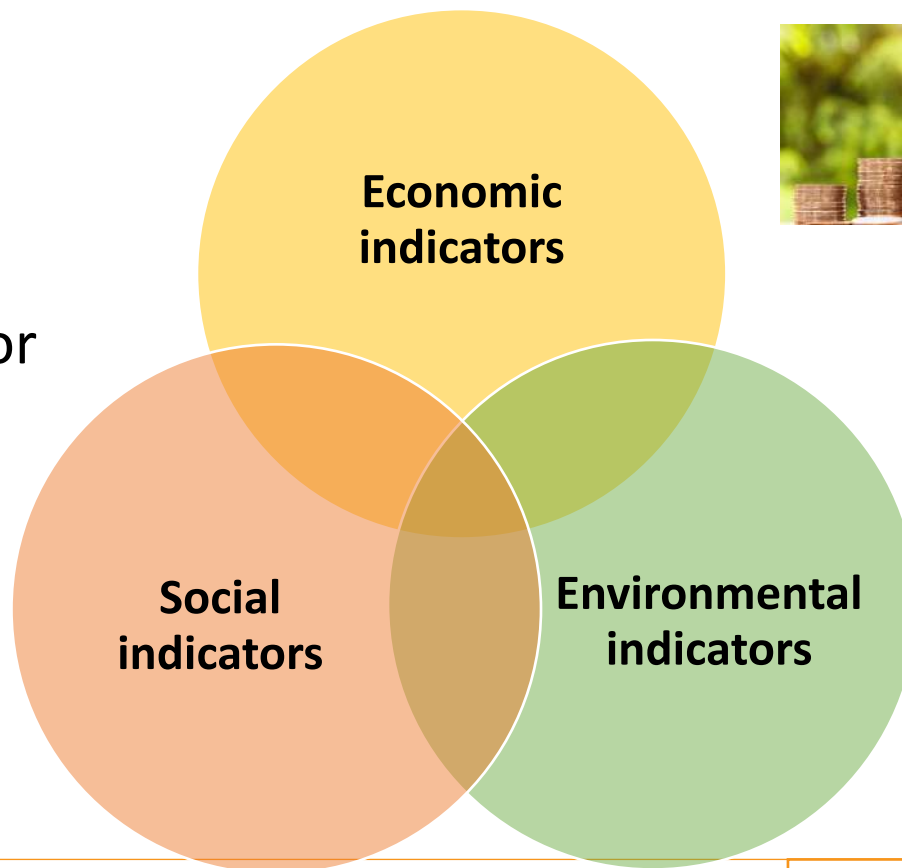


Building of a sustainability grid:
definition of the indicators

→ What needs to be done:
determining a scoring and
references for each indicator, for
each country



Workload
Work conditions
**Services provided to
the territory**



Income
Subsidies
dependence
Transmissibility

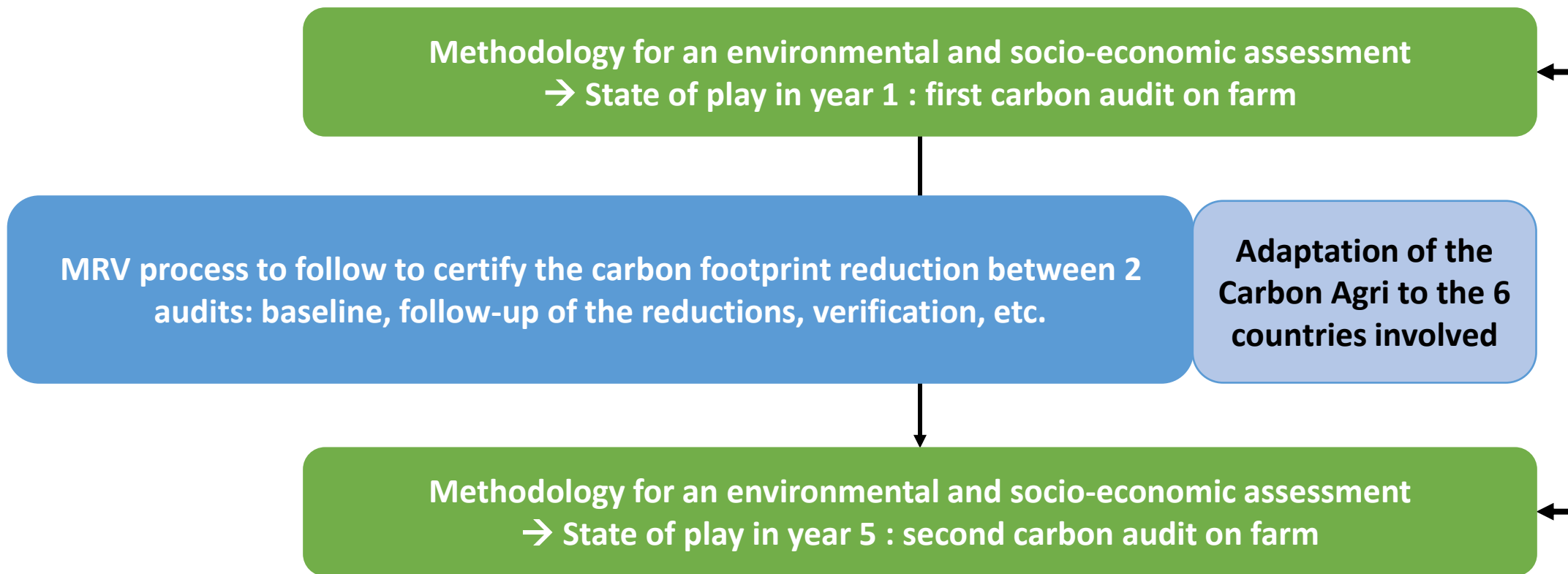


Biodiversity
Water quality
Fossil energies consumption



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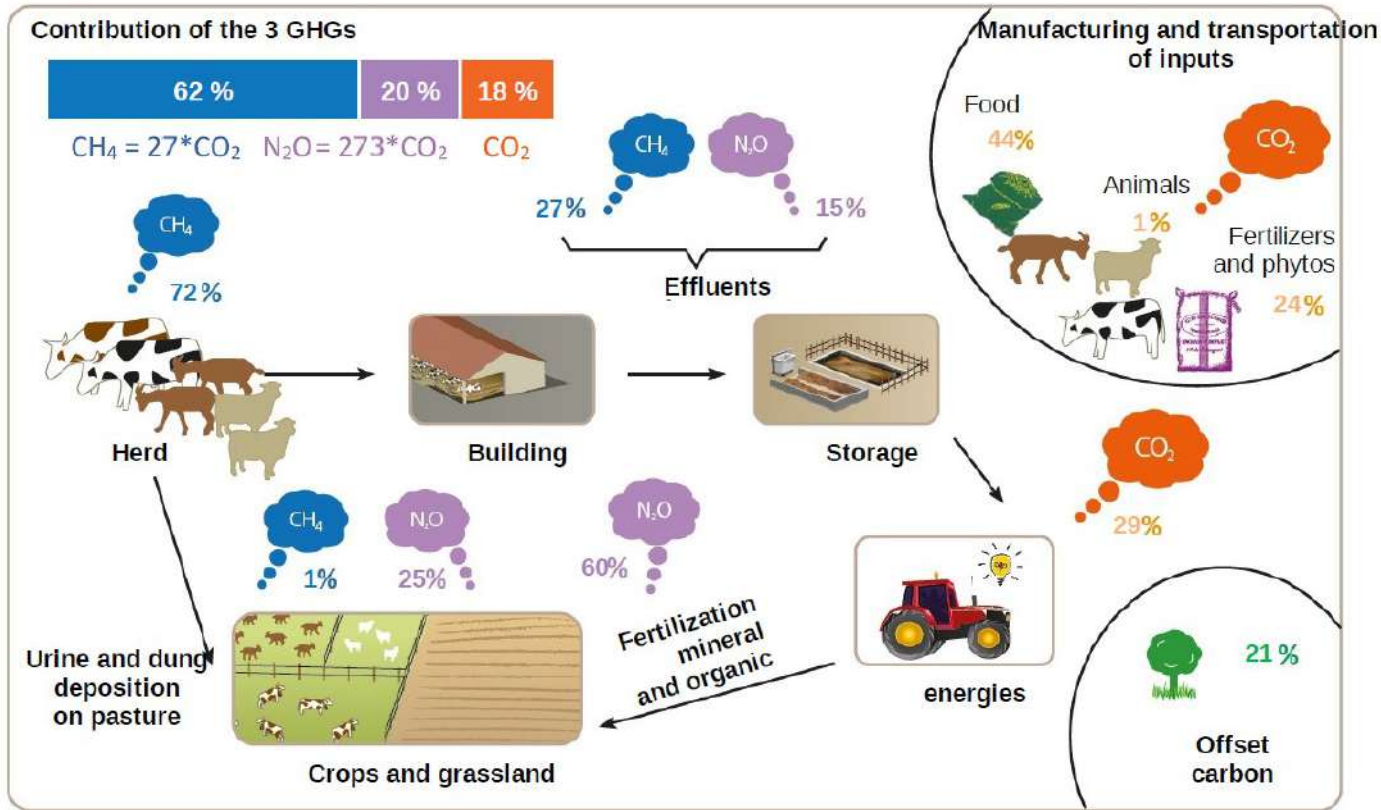
Action C.1. Certification method



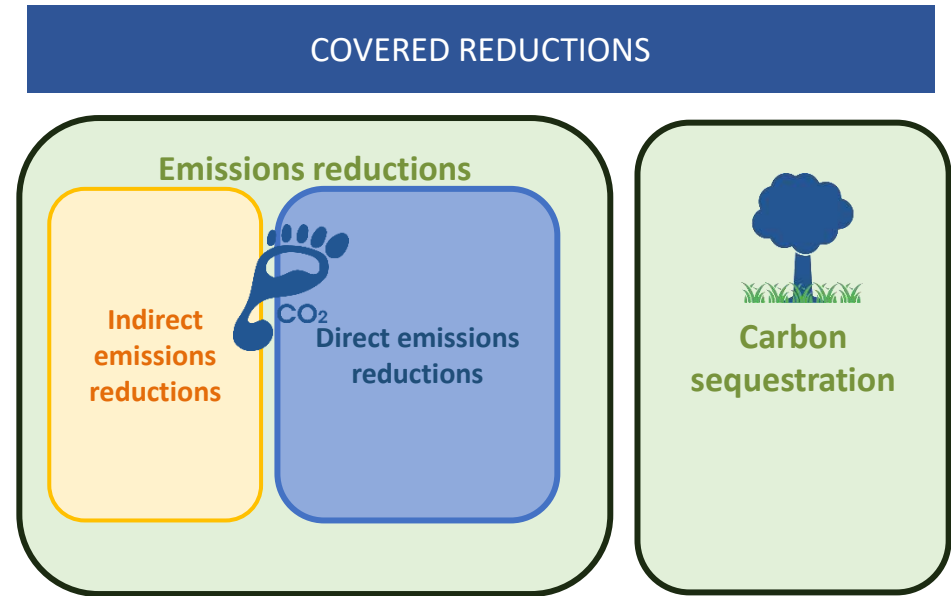
Co-funded by the European Union

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Action C.1. – Harmonisation of the scope



Life Cycle Analysis with a follow-up tool: CAP'2ER or any other tool recognised by the Ministry.



Action C.1. – Harmonisation of the low carbon practices and co-benefits



Landscape and surfaces

Hedgerows–agroforestry – grasslands and legumes – reducing mineral fertilisation- Direct seeding- Intermediate crops



Feeding

Improving forrages quality, more grazing and less concentrates, protein



Energy and buildings

Reducing electricity and fuel consumption. Biogas plant, manure storage



Herd management

Animals health, housing and heifers breeding



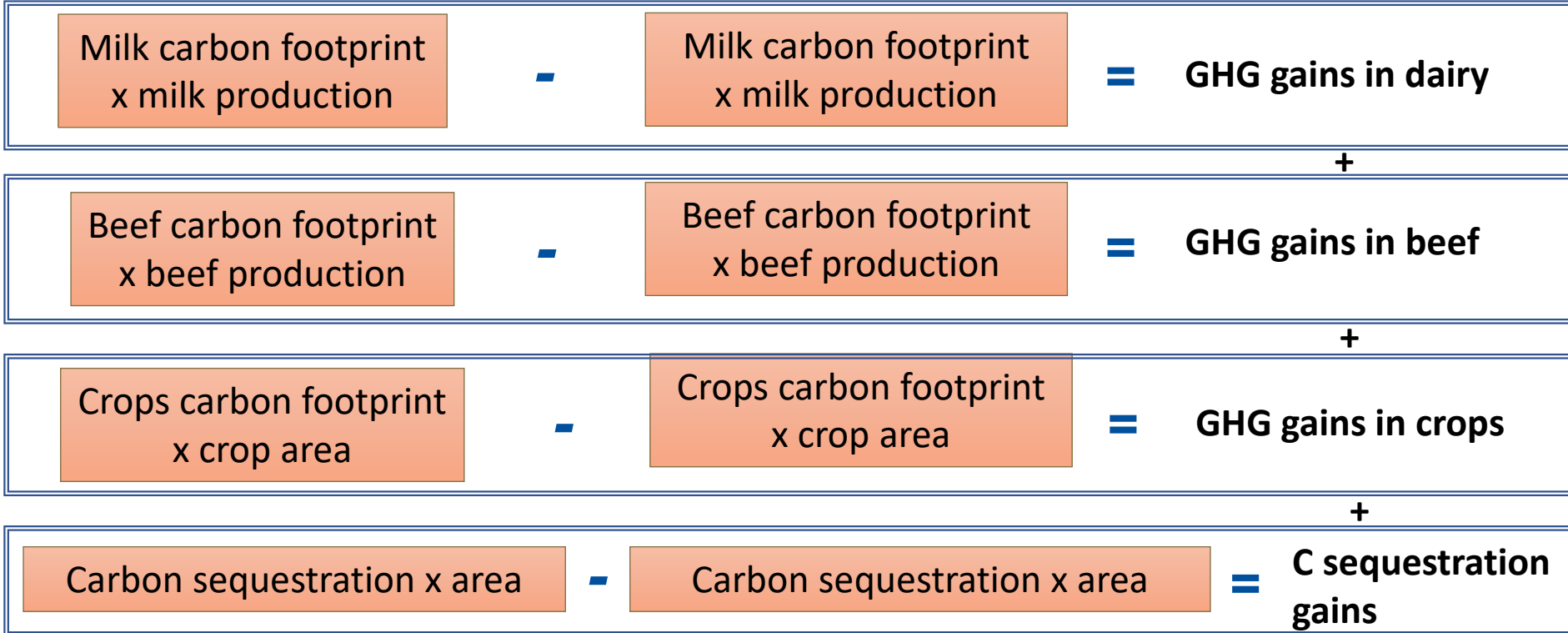
This project is supported by the European Union's LIFE programme.

Action C.1. – Harmonisation of the calculation



Baseline GHG emissions and carbon sequestration

After 5 years GHG emissions and carbon sequestration



CARBON AGRI methodology
 Σ
Carbon reductions farm



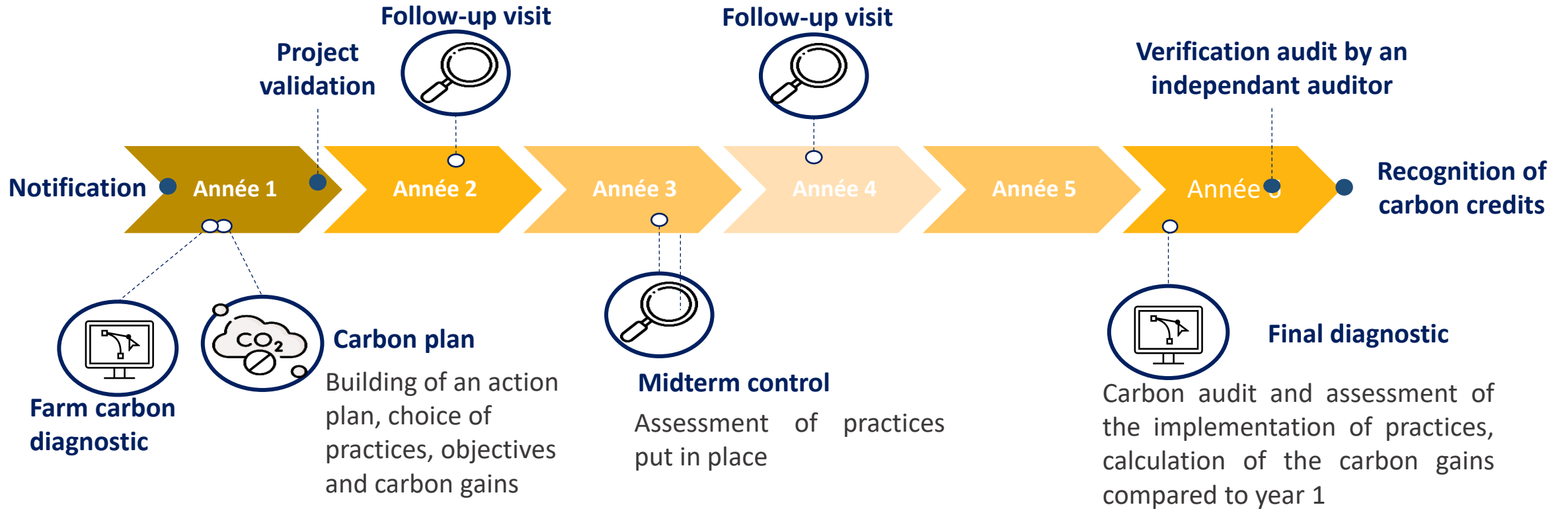
Co-funded by the European Union

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Action C.2. Implementation of 700 low carbon projects on 700 farms



Maximum duration: 5 years, revolving project for 5 years




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Action C.3. Elaborating Carbon Farming projects referential costs



- Technical costs for the implementation of the practices on farms: building a partial budget while defining the action plan.
- Administrative costs (follow-up of the farmers, management of their dossiers and funding of the projects): on the basis of the costs declared in the frame of the LIFE CARBON FARMING project.



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Action C.4. Applying result-based carbon funding mechanism

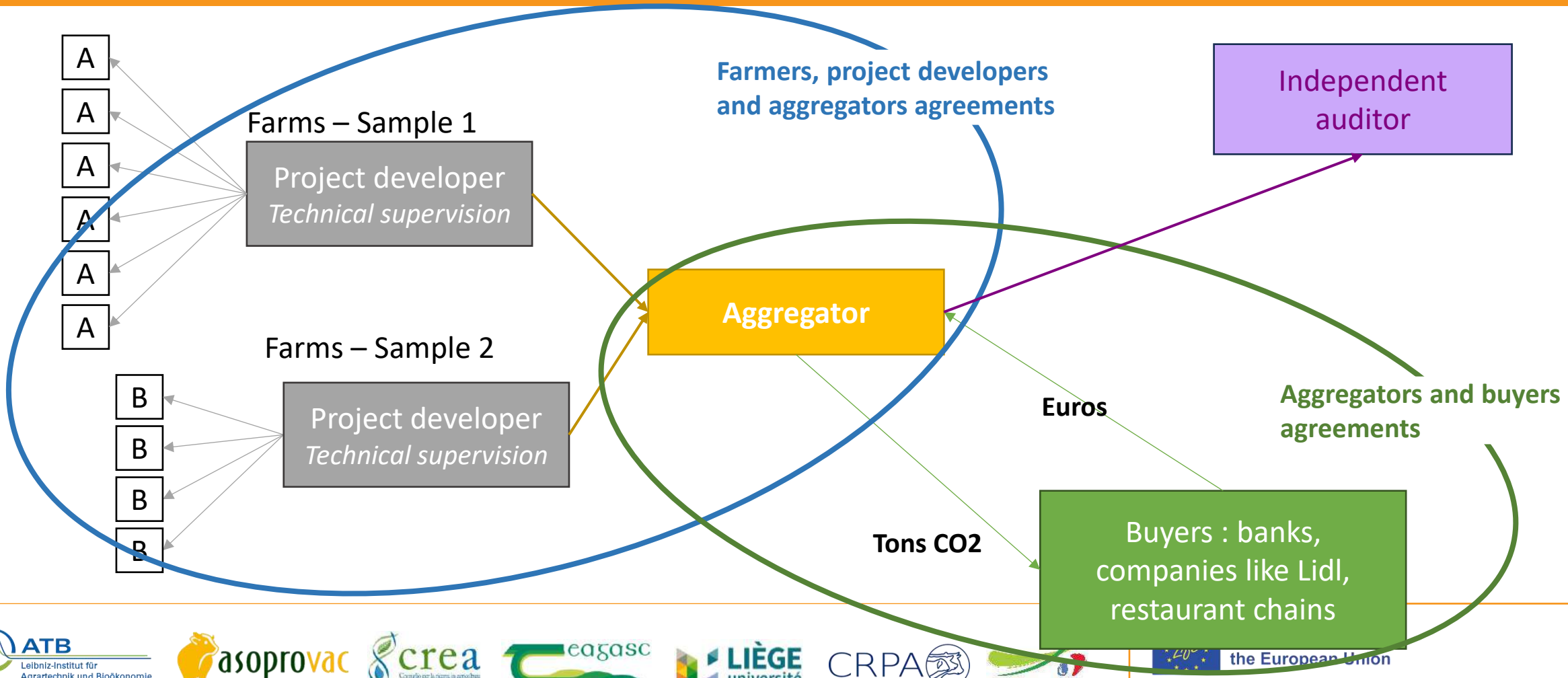


- Finding an aggregator to make the link between farmers and carbon projects funders.
 - FCAA
- Finding funders for the low carbon projects
 - Survey built to better understand the expectancies of potential funders
- Contracting with farmers and project developer on one hand and with buyers on the other hand.



This project is supported by the European Union's LIFE programme.

Action C.4. Applying result-based carbon funding mechanism

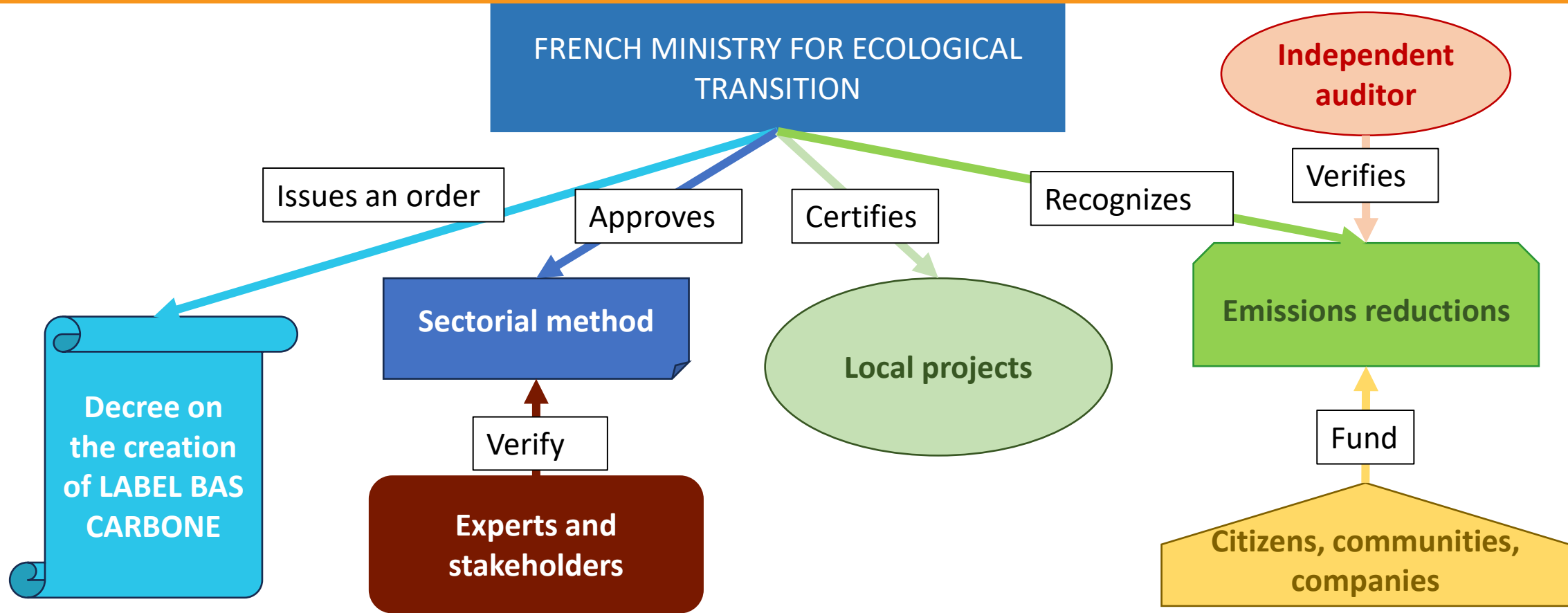


the European Union

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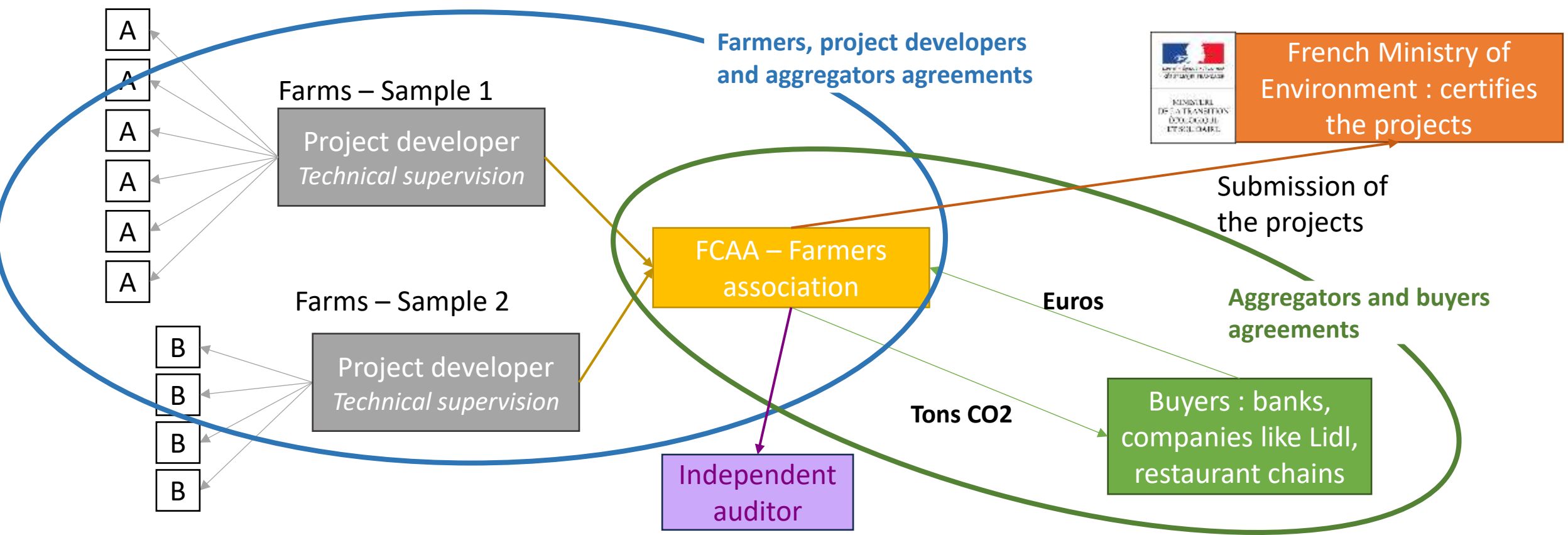


Action C.4. Applying result-based carbon funding mechanism – French example, Label Bas Carbone




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Action C.4. Applying result-based carbon funding mechanism – French example, roles of FCAA




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Action C.4. Applying result-based carbon funding mechanism – French example, 4 calls of projects involving around 2500 farmers



Carbon credit – total price: 40€/tCO₂eq = Farmer: 32€/tCO₂eq + Project developer: 5€/tCO₂eq + FCAA: 3€/tCO₂eq



1st project accredited in 2020

- 300 farmers
- 137 000 t CO₂eq reductions



2nd project accredited in 2022

- 930 farmers
- 511 000 t CO₂eq reductions

3rd project submitted in November 2023

- 330 farms
- 214 500 t CO₂eq reductions

4th project to be submitted in December 2023

- 1000 farms



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Other actions



- Communication :
 - Communication documents
 - Website: <https://www.life-carbon-farming.eu/>
 - Newsletter : bit.ly/48fEuP5
 - Publishing of testimonies on the YouTube channel: bit.ly/469D2vJ
- Writing of guidelines on the several aspects of the project
- Events: Organisation of European and national meetings for the partners and the farmers of the project
- Field measurements: enteric methane and carbon storage in soils



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Thank you for you attention!



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**Carbon farming: regulatory framework, state of the art
and future prospects for agriculture.**

Dr. Ilaria Falconi

CREA - Research Centre for Policies and Bioeconomy

National Rural Network

EU member group experts carbon farming

Verona - 14 October 2024

Mapping of the Political Framework UE

Paris Agreement

Reporting and absorption obligations under the Kyoto Protocol (articles 3.3 and 3.4).

EU climate target 2040 (EU GHG emissions cut by 90% by 2040 from 1990 levels and atmospheric carbon removals of 400 MtCO₂).

European climate legislation (EU Regulation n. 2021/1119)

Green new deal UE

EU Regulation n. 2023/839 amending the Reg. EU n. 2018/841 concerning the LULUCF sector. (CO₂ absorption 310 million tons of carbon by 2030 and carbon neutrality by 2050 in UE).

EU Regulation n. 2023/857 amending the reg. EU n. 2018/842 concerning the effort sharing sector (energy, waste, agriculture, industrial processes and use of products).

Energy Efficiency Directive (Directive EED)

REpowerUE

Communication from the Commission on sustainable carbon cycles (COM(2021) 800)

Proposal for EU Regulation establishing a certification framework for carbon removals (COM(2022) 672 final, 2022/0394 (COD))

Proposal Soil Monitoring Law

REpowerEU: 45% renewable energy in the EU by 2030.
European climate: Renewable energy at 42.5% by 2030 in EU compared to 33%.

Proposal for a European regulation on the certification of carbon removals

CAP Strategic Plans (EU Reg. n. 2021/2116)

Overlap with monitoring period and method.

Proposal for a European regulation on the certification of carbon removals

Soil Monitoring Law

Possible overlaps and/or contrasts between the geographical extent of the soil districts (Soil Monitoring Law Directive) and the homogeneous geographical areas provided by the proposed Regulation on carbon farming for the identification of the baseline.

Proposal for a European regulation on the certification of carbon removals

Reporting and absorption obligations under the Kyoto Protocol

Alignment between the Certified Carbon Credit Register and the National Greenhouse Gas Inventories Register will be necessary to avoid double counting of removals or an incorrect assessment.

EU Regulation n. 2023/839 amending the Reg. EU n. 2018/841 concerning the LULUCF sector.

REpowerEU Energy Efficiency Directive

Soil management should ensure climate mitigation through the positioning of renewable energy plants (photovoltaics) or the implementation of agricultural practices aimed at increasing carbon.

**INDICATORS
REQUIRED**

NO INDICATORS RELATED TO SOIL
BIODIVERSITY

SOIL BIODIVERSITY INDICATORS

ORGANIC
CARBON
INDICATOR IN
CULTIVATED
MINERAL SOILS.

EU
Regulation on
the
restoration of
nature

Proposal Soil
Monitoring
Law

AGRICULTURAL
PRACTICES.
ORGANIC
CARBON IN SOIL
IS ONE OF THE
DESCRIPTORS

**SUSTAINABLE TARGET VALUES AND
OPERATIONAL LIMIT VALUES**

BASELINE
ADDITIONALITY
METHODOLOGY
AGRICULTURAL
PRACTICES

Regulation
establishing a
certification
framework
for carbon
removals

CAP

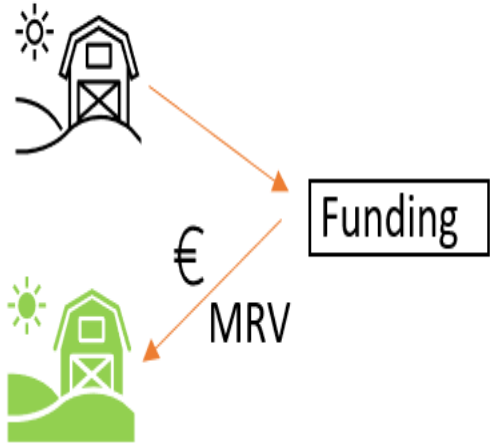
AGRICULTURAL
PRACTICES.
BACKGROUND
INDICATORS.
OUTPUT
INDICATORS.
PERFORMANCE
INDICATORS.

OPTIONAL

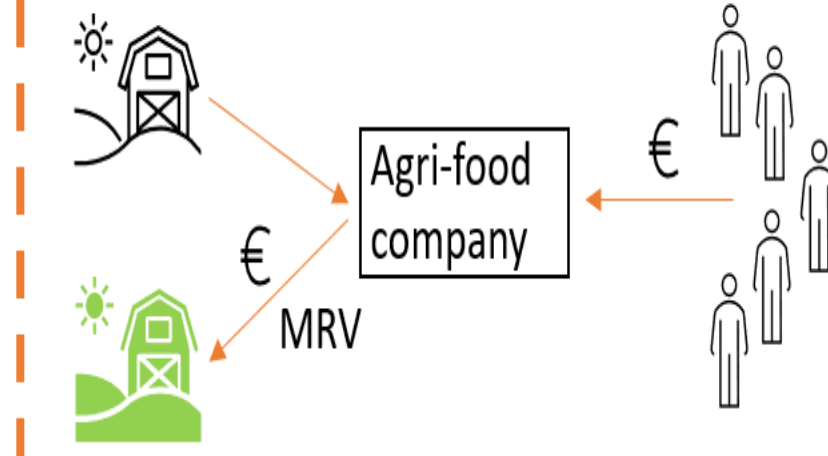
HYBRID SCHEME, ACTION OR RESULT?

The different schemes system

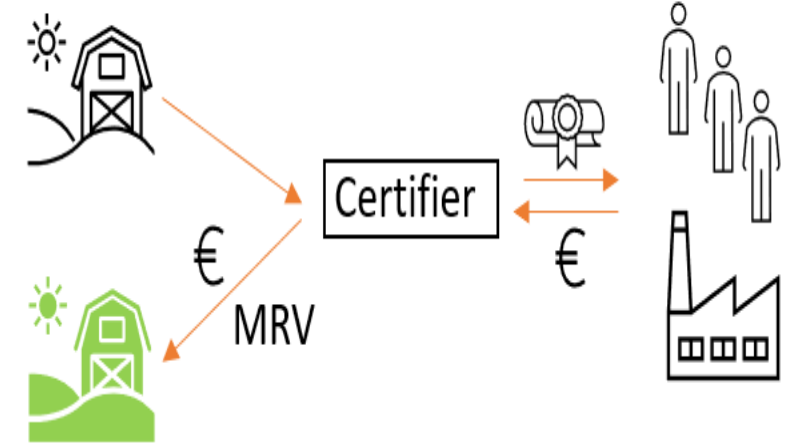
Farm payments



Corporate supply chain



Voluntary carbon markets



Typology of schemes investigated in Road4Scheme.

Results:

- The majority of the schemes are **VCM**.
- Different sets of **eligible practices**.
- **Co-benefits** are reported but not measured/sampled (including result-based scheme) or rewarded, specifically.
- Different carbon removals assessment methodologies.
- Highly different **carbon credits values**.

Proposal for EU Regulation establishing a certification framework for carbon removals

The EU's intention is to provide Member States with a clear set of rules that can both facilitate the provision of public funding based on results, and promote a voluntary carbon market based on strict standards, transparent and verifiable.

The proposal will promote innovative and sustainable technologies for removing carbon in agriculture and contribute to the EU's climate, environmental and zero pollution targets.

In particular, the proposal on certification of removals will allow for more effective and results-based support to be directed towards activities to capture carbon in agricultural and forestry soils.

With this document, Europe recognises the role of carbon farming as a form of "**green business**", which increases the sequestration of carbon in biomass and soils, reduces GHG emissions and guarantees co-benefits (e.g. fertility and biodiversity), and for this reason it encourages it through public or private initiatives.



Brussels, 30.11.2022
COM(2022) 672 final
2022/0394 (COD)

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

establishing a Union certification framework for carbon removals

{SEC(2022) 423 final} - {SWD(2022) 377 final} - {SWD(2022) 378 final}

The Commission's carbon farming activities are divided into three macro – categories:



PERMANENT STORAGE

Bioenergia con cattura e stoccaggio del carbonio (BECCS), cattura e stoccaggio del carbonio nell'aria diretta (DACCS)

Permanent



CARBON FARMING

Rimboschimento, silvicoltura, agroforestazione, sequestro del carbonio nel suolo, ripristino delle torbiere

At least 5 years



CARBON STORAGE IN PRODUCTS








Uso di materiali a base di legno nelle costruzioni, cattura e utilizzo del carbonio (CCU) di lunga durata

At least 35 years

Temporary

Cost/benefit analysis

Carbon sequestration monitoring methods

Method	Economic assessment (farmer)	Dependability	Applicability (medium term)
Sampling in combination with laboratory analysis 	High	High	Low
Use of proximal sensors 	High	Medium-high	Low
Use of analytical models 	Low	Medium-low	Medium
Use of satellite images 	Low	Medium	Low
Use of national or regional databases 	Low	Medium-low	Medium
Use of standard emission factors 	Medium-low	Medium-low	High
Use of land use maps 	Low	Medium-low	Medium

Comments to the EU Regulation establishing a certification framework for carbon removals

- The proposal for a regulation is somewhat vague from a methodological point of view. **For the implementation of the Regulation, delegated and executive acts defining certification methodologies must be drafted and adopted.**
- **The proposed Regulation refers to agricultural practices as outlined in the Communication on sustainable carbon cycles.**
- The proposed regulation defines four criteria, cd. **QUALITY criteria**, inherent in quantification (carbon removal activities must be measured accurately and provide clear climate benefits), additionality (Carbon removal activities must go beyond existing practices and what is required by law), long-term storage (permanent storage of carbon must be ensured) and sustainability (Carbon removal activities shall be non-damaging).



Brussels, 30.11.2022
COM(2022) 672 final

2022/0394 (COD)

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

establishing a Union certification framework for carbon removals

{SEC(2022) 423 final} - {SWD(2022) 377 final} - {SWD(2022) 378 final}

<p>QU.</p>	<p><i>Net benefit from carbon absorption by the agriculture-forestry sector, reduction of indirect greenhouse gas emissions and reduction of greenhouse gas emissions from agricultural soils. Greenhouse gas emissions are nitrous oxide and carbon dioxide as they relate to land management, land use change, the use of fertilisers, fuel and energy used.</i></p>
<p>A.</p>	<p>Baseline: The baseline should be highly representative of comparable similar activities and able to consider both social, economic, environmental and technological circumstances; as well as geographical context and local conditions (standardized baselines). The Commission will review the standardised baseline at least every five years.</p> <p>The Commission is also assessing an activity-specific baseline. Regulatory, financial or activity-specific additionality. Additionality must go beyond national and EU regulatory requirements or be determined by the incentive effect of certification.</p>
<p>L.</p>	<p><i>Commission has defined a precise time frame for each carbon farming practice. 5 years. To be assessed % of buffer.</i></p>
<p>ITY</p>	<p><i>At least the side benefit for soil protection (including prevention of soil degradation) and the protection and restoration of biodiversity should be ensured as mandatory.</i></p>

Comments to the EU Regulation establishing a certification framework for carbon removals



Brussels, 15.12.2021
COM(2021) 800 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT AND THE COUNCIL

Sustainable Carbon Cycles

[SWD(2021) 450 final] - [SWD(2021) 451 final]



ZOOTECHNICS?

Agricultural practices identified in the communication on sustainable carbon cycles:

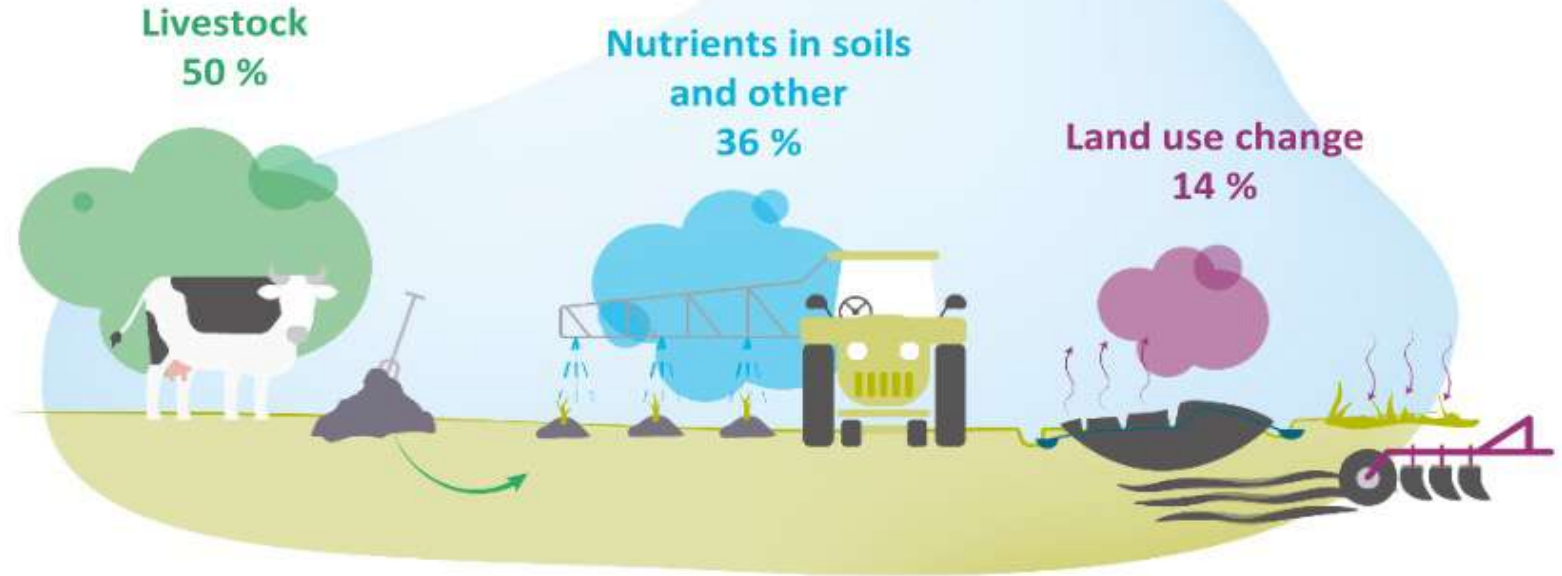
- Maintenance of permanent grassland;
- agroforestry,
- use of catch crops and cover crops,
- conservation tillage,
- conversion of set-aside areas into permanent grassland;
- conversion of cultivated land into fallow land;
- restoration of peatlands and wetlands.



Comments to the EU Regulation establishing a certification framework for carbon removals



THE
IMPORTANCE
OF
ZOOTECHNICS?



Mainly methane (CH₄) from

- feed digestion by cattle and sheep
- storage of cattle and pig manure

Mainly nitrous oxide (N₂O) from

- application of chemical fertiliser
- manure applied by farmers or deposited by grazing cattle

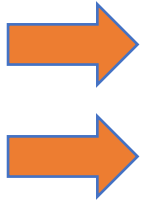
Mainly carbon dioxide (CO₂) from

- cultivation of drained organic soils (peatland)
- carbon sequestration on grassland and cropland

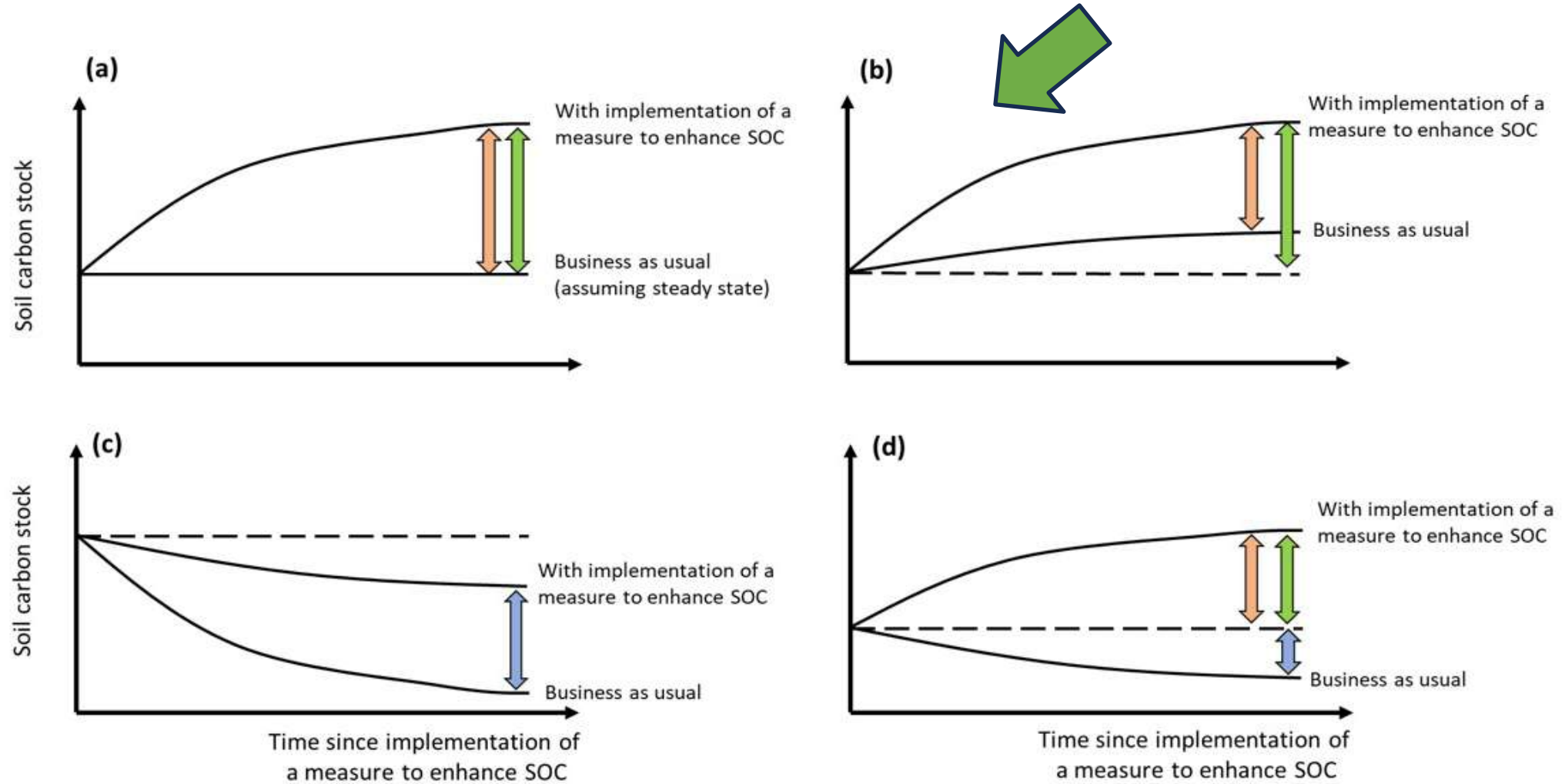
Comments to the EU Regulation establishing a certification framework for carbon removals

The carbon sequestration rates as found in global meta-analyses and local long-term experiments compared to the modelled sequestration rates (Lesschen et al., 2021) and the sequestration rates found in the SL LTE's (Schepens et al., 2022).

Carbon practice	Mean global	Local European	Sand		Clay	
	t C ha ⁻¹ yr ⁻¹	t C ha ⁻¹ yr ⁻¹	RothC t C ha ⁻¹ yr ⁻¹	LTE t C ha ⁻¹ yr ⁻¹	RothC t C ha ⁻¹ yr ⁻¹	LTE t C ha ⁻¹ yr ⁻¹
Cropping to grassland	1.01	0.5 - 1.1	0.71		0.50	
Extending grassland age	1.1 ± 0.2	0 - 1.6		1.75		1.34
Maize-grass rotation		0.11-0.7	0.58	1.77	0.46	
Change in arable crop rotation		0.06 - 0.45	0.52	0.27	0.54	0.55
Cover crops	0.5 ± 0.03 0.32 ± 0.08	0.18 - 0.4	0.63	-0.27	0.51	
Solid manure	0.42 ± 0.11	0.15 - 0.24 0.07 - 0.22 (t C applied ⁻¹)	0.015		0.015	0.11
Compost	0.71 ± 0.4	0.62 - 2.1	0.022	1.56	0.025	0.38
Crop residues	0.41 ± 0.04 0.38	0.17 -0.26	0.21		0.45	
Agroforestry	0.21 ± 0.79 0.3-0.9	0.033				
Bird fields		0.04				
Permanent field margins		0 - 0.52	0.14	-4.5	0.21	2.3
Non-inversion tillage	0.07 ± 0.02 0.22 ± 0.10 0.31					
Herb-rich grassland		0 - 1.8		1.42		-1.45



Comments to the EU Regulation establishing a certification framework for carbon removals



↑ = C sequestration of a measure

↑ = total C sequestration

↑ = C loss mitigation of a measure

Investigated in Carboseq

Comments to the EU Regulation establishing a certification framework for carbon removals

Minimum regulatory framework to be respected (GAEC – conditionality).

Assessment of soil status by on-site sampling and laboratory analysis.
Information base at farm level

Standardised baseline scenario highly representative of comparable activities and capable of considering social, economic, environmental and technological circumstances, geographical context and local conditions (LUCAS model).

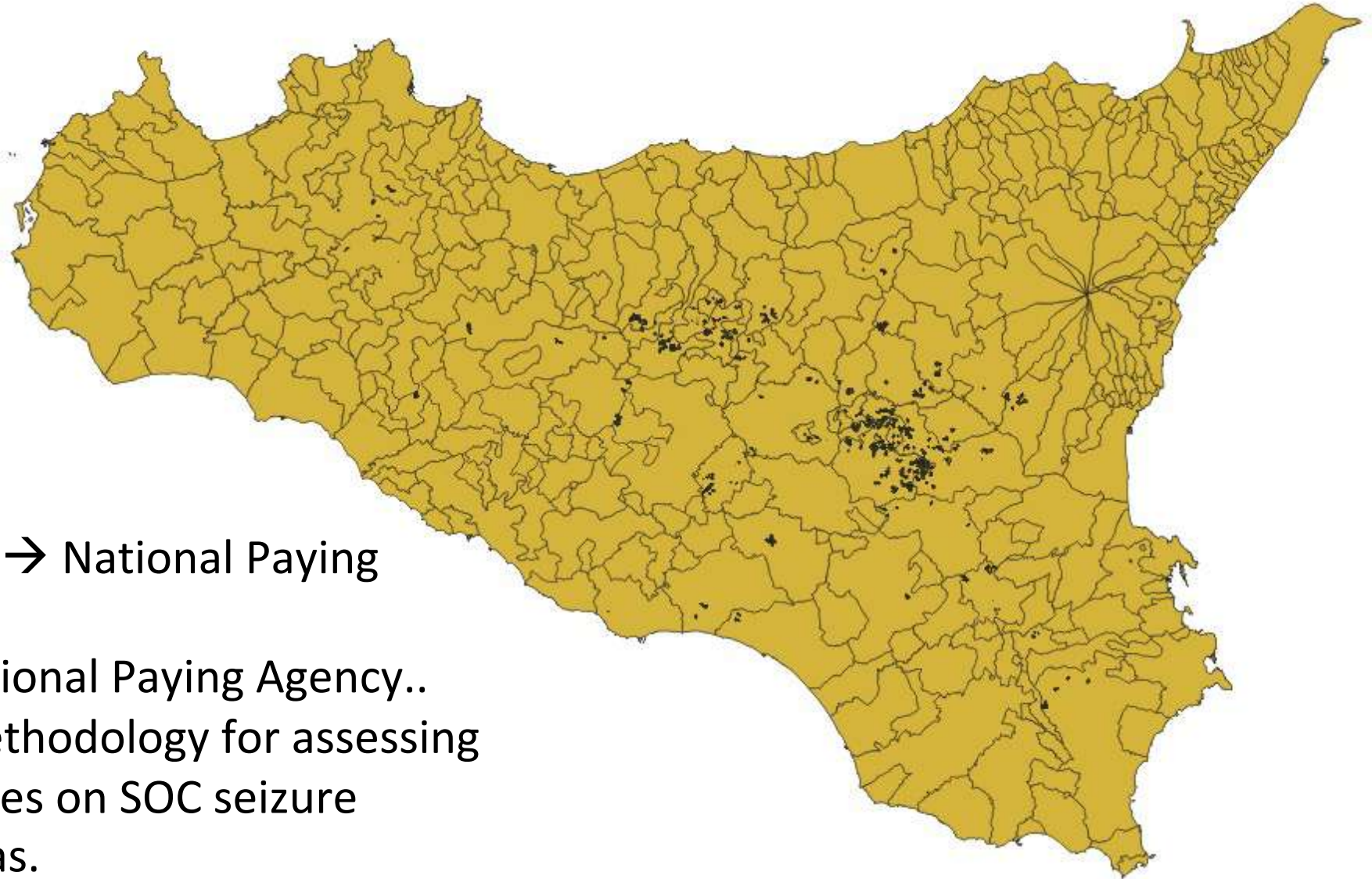
Use of the Roth-C deterministic model as it simulates the dynamics of soil organic carbon (SOC) over a period of 20 years taking into account the effects arising from the implementation of agricultural practices and local soil and climate information.

Investigated in Carboseq

Comments to the EU Regulation establishing a certification framework for carbon removals



Legend
NUTS 3 level boundaries
Land parcels under conservation agriculture contracts (2014-2022 RDP)



First pillar - conditionality → National Paying Agency +
Second pillar : RDP → Regional Paying Agency..
The analysis outlines a methodology for assessing the impact of CAP measures on SOC sequestration potentials in selected areas.

Comments to the EU Regulation establishing a certification framework for carbon removals













- Cover crops
- Crops and crop diversification
- Crop residue management
- Reduced tillage and no-tillage
- Irrigation
- Agroforestry
- Biochar and other soil amendments
- Grassland management















Impact on C stocks and C-inputs changes for different pedo-climatic regions in EU

No-CO₂ GHG emissions
Subsoil (30-100 cm)

Specific maps of the SOC-sequestration potential in Italy

Use of the Roth-C deterministic model as it simulates the dynamics of soil organic carbon (SOC) over a period of 20 years taking into account the effects arising from the implementation of agricultural practices and local soil and climate information. Also, use of the model toolbox (IPCC Tier 3 approach).

COUNTRY	ORGANIZATION/ PROGRAMME	METHODOLOGY	PERMANENCE
		Avoided conversion of grasslands and shrublands to crop production 2.0	= crediting period 5 - 40 years
		Soil Enrichment Protocol v 1.1	100 years: credits issued ex-ante. If less: credits are 1% of the tCO2e stored/year. Issued ex-post
		Avoided grassland conversion protocol 2.1	100 years after credits issuance. Monitoring and verification period > crediting period
		VM0042 Methodology for Improved Agricultural Land Management v 1.0	Non-Permanence Risk calculated by the VCS AFOLU Tool
		Nori Croplands Methodology, v 1.3	10 years
		Quantification Protocol For Conservation Cropping Version: 1.0	20 years
		Methodology Determination 2021	100 years Or 25 years with 20% discount on credits issued

COUNTRY	ORGANIZATION/ PROGRAMME	METHODOLOGY	LEAKAGE
		Avoided conversion of grasslands and shrublands to crop production 2.0	Default value of 20% market leakage
		Soil Enrichment Protocol v 1.1	Accounts for displacement of livestock and decline in crop yields (>5%).
		Avoided grassland conversion protocol 2.1	20% leakage effect due to displacement of livestock and crop yields reduction
		VM0042 Methodology for Improved Agricultural Land Management v 1.0	Extra manure-C (12% of the manure-C) + productivity decline (>5%) + displacement of livestock (emissions as if steady number).
		Nori Croplands Methodology, v 1.3	"Verification will establish if SOC stock gains result in losses outside of project boundary"
		Quantification Protocol For Conservation Cropping Version: 1.0	Based on ISO 14064:2, activity shift deemed minimal
	 Australian Government	Methodology Determination 2021	The Regulator notifies the project for non-genuine carbon abatement
		Proposal of regulation for the certification of carbon removals	"the carbon captured should outweigh the emissions that can be caused by carbon leakage" ?



APERTA A IMPRESE AGRICOLE E AGROALIMENTARI

«Generazione Cibo», la piattaforma per l'agricoltura rigenerativa

La piattaforma ha proposto due emendamenti al decreto legge agricoltura per favorire la diffusione dell'agricoltura rigenerativa

«Generazione Cibo», la piattaforma nazionale nata a ottobre 2023 che riunisce imprese e associazioni attive sul tema dell'agricoltura rigenerativa e del *carbon farming*, sta lavorando per introdurre due innovazioni legislative alla luce della discussione in corso al Senato sul decreto legge agricoltura. **In primo luogo è necessario riconoscere i crediti di carbonio agricolo come attività connessa anziché finanziaria.**

In secondo luogo è indispensabile sostenere le aziende agricole, che introducono pratiche di agricoltura rigenerativa, attraverso un credito d'imposta.

L'agricoltura rigenerativa o *carbon farming* rappresenta uno dei maggiori strumenti a disposizione del comparto agricolo e alimentare per promuovere e rafforzare la produzione e i redditi dei produttori tutelando la salute dei suoli e l'ottimizzazione dell'im-

piego delle risorse. Tuttavia, a livello italiano e UE mancano i riferimenti normativi per definire l'agricoltura rigenerativa e le modalità per promuoverne l'applicazione e il sostegno.

«Generazione Cibo» è nata con l'obiettivo di favorire la conoscenza tra gli operatori del settore delle migliori pratiche di agricoltura rigenerativa e portare all'attenzione dei decisori politici le esigenze del comparto.

Si tratta di una piattaforma aperta, con l'ambizione di rappresentare un ponte verso le istituzioni, da un lato, e le imprese agricole, dall'altro, divulgando tante tecnologie e interventi agronomici già diffusi in Italia, anche grazie al supporto scientifico di Invernizzi Agri-Lab di SDA Bocconi.

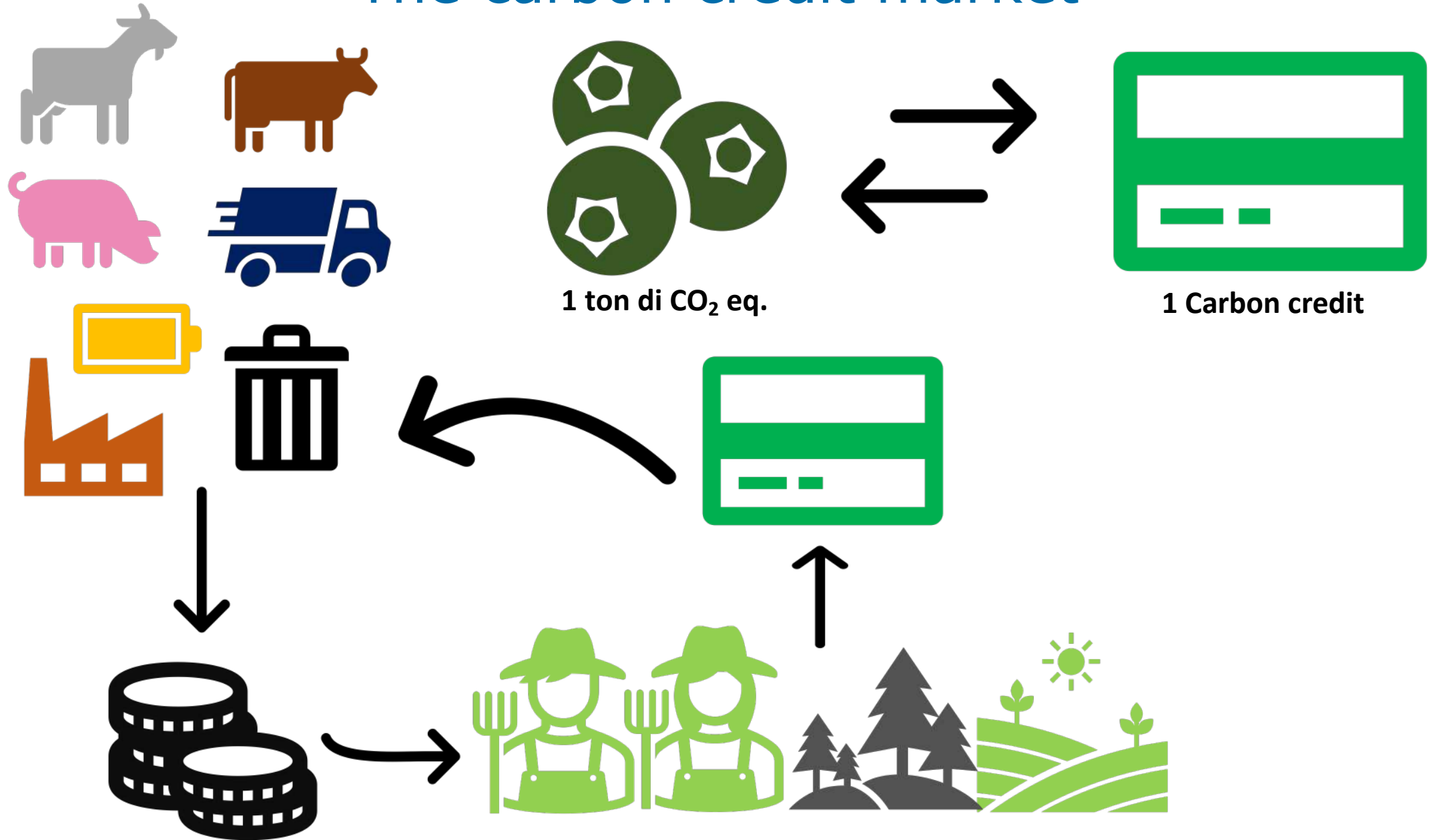
La prima indicazione riguarda proprio l'inquadramento del credito di carbonio come attività connessa in quanto si tratta di un servizio ecosistemico direttamente collegato alle pra-

tiche di gestione dei suoli e delle coltivazioni. Questo consentirebbe ai produttori di ottenere un reddito aggiuntivo e di spingere la diffusione delle pratiche di agricoltura rigenerativa. Non solo, si contribuirebbe a realizzare un mercato nazionale dei crediti di carbonio orientato allo scambio degli stessi tra comparto primario e aziende agroalimentari nel nostro Paese, rafforzando l'integrazione verticale delle filiere. Per quanto riguarda invece l'introduzione di un credito d'imposta, servirebbe a sostenere, in via transitoria, le aziende agricole e alimentari che impiegano servizi di consulenza agronomica per innovare tecniche agronomiche e tecnologie orientate all'agricoltura rigenerativa. Il nostro Paese è fortemente deficitario di materie prime, ma al contempo tanti suoli sono a rischio fertilità: per consolidare i nostri primati in campo agroalimentare e per mantenere forti le aziende abbiamo bisogno di un «cambio di passo» impiegando tutte le pratiche e le tecnologie che possono darci risultati e rese migliori, efficientando l'impiego delle risorse, riducendo gli input esterni, contrastando i cambiamenti climatici e tutelando agricoltori e aziende: temi affrontati da «Generazione Cibo» anche al G7 agricolo di Ortigia (Siracusa).

Filippo Gallinella

In Italy the livestock sector will not produce any carbon credits at this time!!!

The carbon credit market



ACTIVITIES

QUANTIFICATION

PRACTICES

The inclusion of livestock emission reductions will be assessed in a report to be made by the Commission by 31 July 2026. The Commission will also develop a pilot methodology to assess potential units generated by emission reduction activities.

Minimum sampling depth of 30 cm. In the case of no or reduced processing, it is considered useful to consider also the subsoil.

Preference for criteria-based approach compared to specific list of eligible practices.

Inclusion of agroforestry in agricultural methodology (rather than forestry methodology).
Inclusion of biochar in agricultural methodology (rather than permanent carbon removal).

It is considered more useful to provide criteria on transparency and accuracy of measurements rather than to impose specific measurement techniques.

The European register will be established by 2028.
The Commission has presented a declaration committing itself to adopt the first delegated act on certification methodologies within one year of the entry into force of the regulation.

A combination of monitoring methods is preferred: soil sampling, modelling and remote sensing.

Revised ETS directive: Commission from 2026 to consider including carbon removals permanent.
Revision of the LULUCF Directive: The Commission will assess the inclusion of carbon farming from 2026.
Revision of the ETS directive: from 2027 it will cover road transport, small industry and buildings.

European Carbon Credit Market

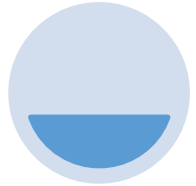


Nature Based Carbon Offset



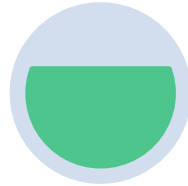
Source: Carbon credits <https://carboncredits.com/carbon-prices-today/>

Conclusions: some development barriers for farmers



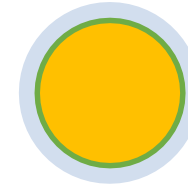
Social

1. Age and education of farmers;
2. Lack of pilot farms/case studies/demo_farms;
3. Peer pressure.



Economic

- 1.Lack of support;
- 2.Lack of information;
- 3.Profitability (long term);
- 4.Investment;
- 5.Cooperation of farmers;
- 6.Transition and risk management costs;
- 7.Relationship between producer and consumer.



Technological

1. Lack of knowledge about new technologies;
2. Cost/benefit assessment.

ilaria.falconi@crea.gov.it

Grazie per l'attenzione!





Carbon Farming: sostenibilità ambientale dell'allevamento bovino, azioni di mitigazione e modello di mercato di crediti di carbonio

Progetto LIFE CARBON Farming (LIFE20 CCM/FR/001663)

Azione C5 Setting up a EU low carbon farming network

Camera di Commercio Industria Artigianato Agricoltura di Verona

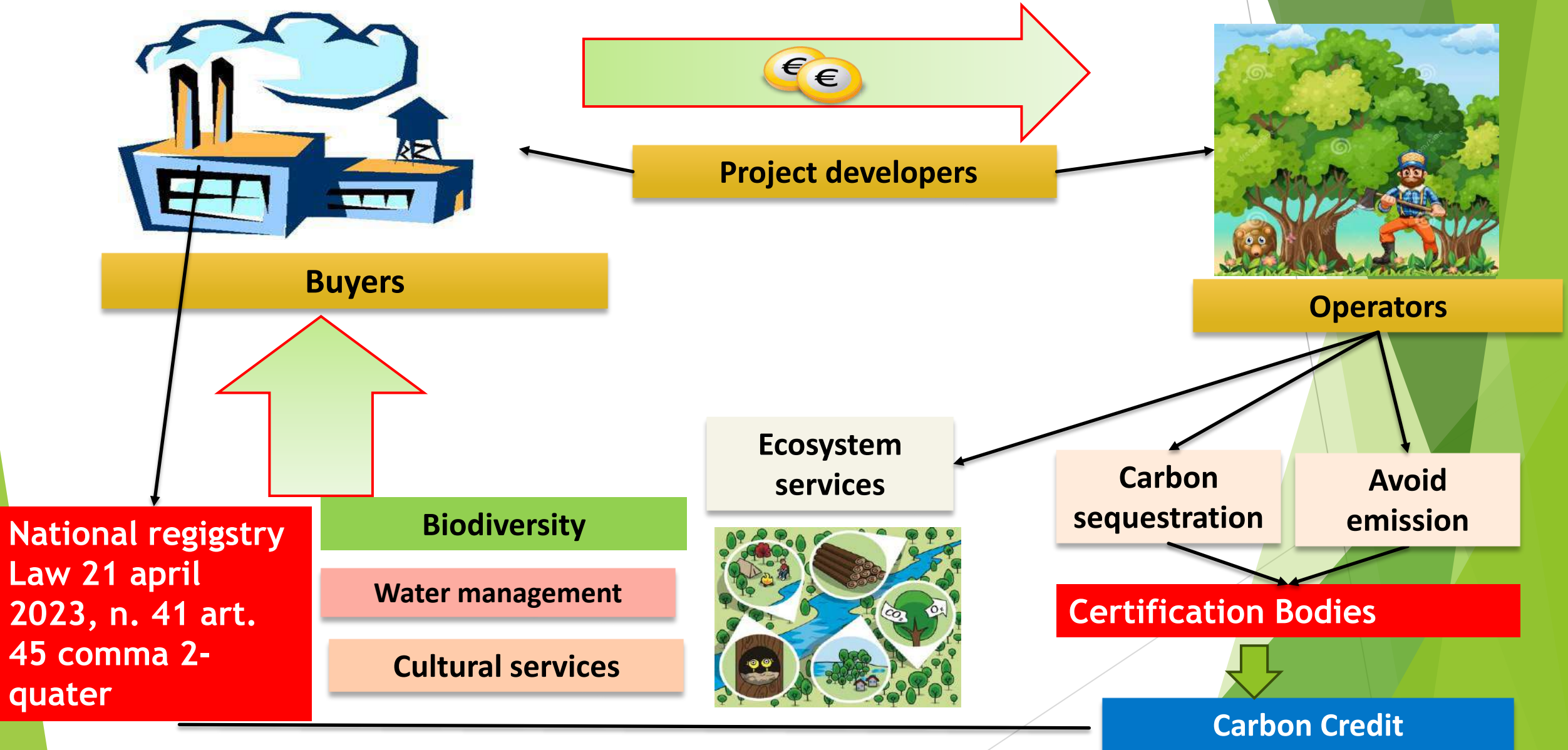
14 ottobre 2024 ore 14.00

Voluntary carbon market: market context and future prospects

Saverio Maluccio

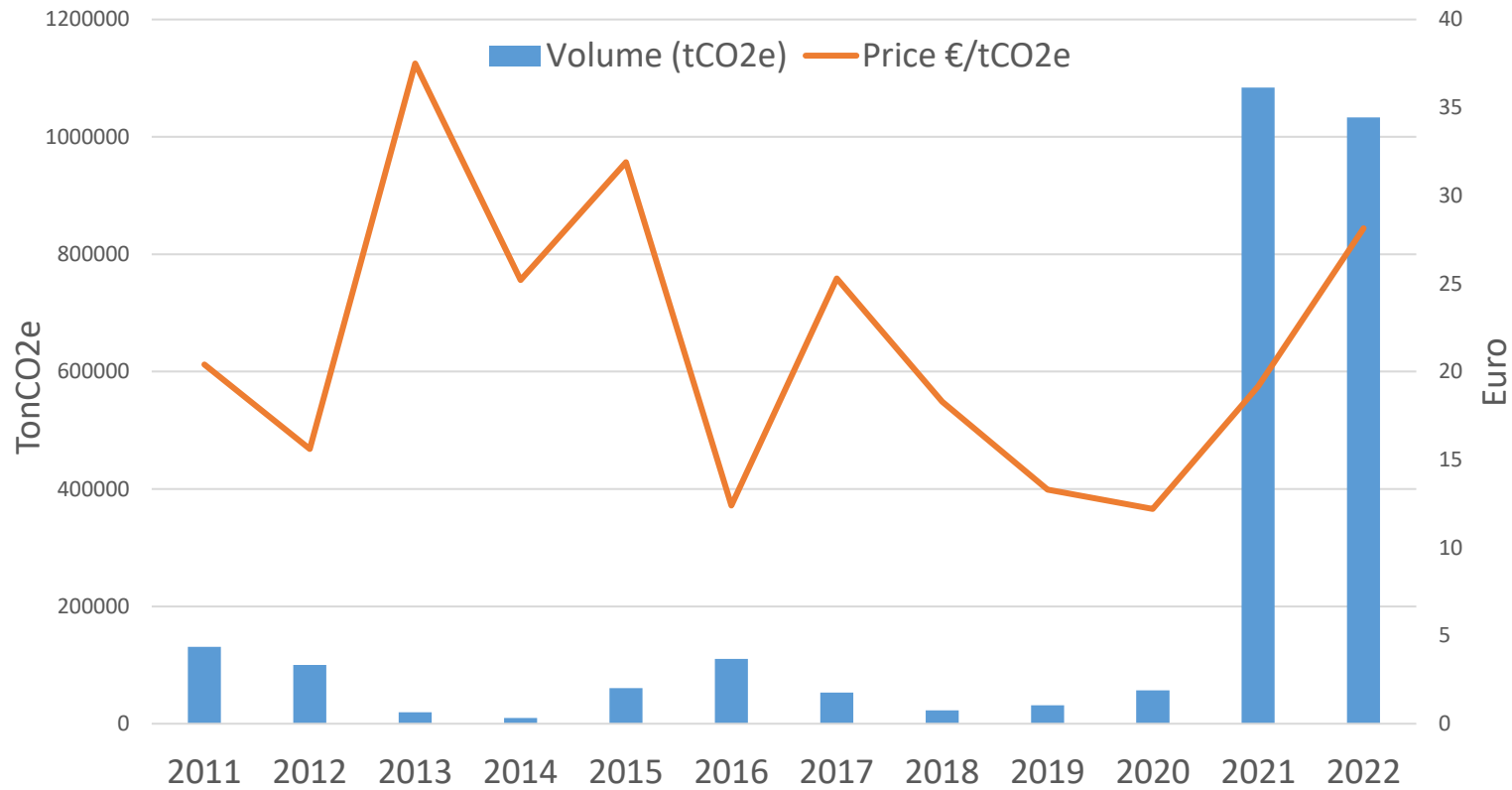
CREA Centro di ricerca Politiche e bioeconomia

BACKGROUND: What is the market pattern : who are the players, what characteristics do the projects have, and what are the critical issues in the market?

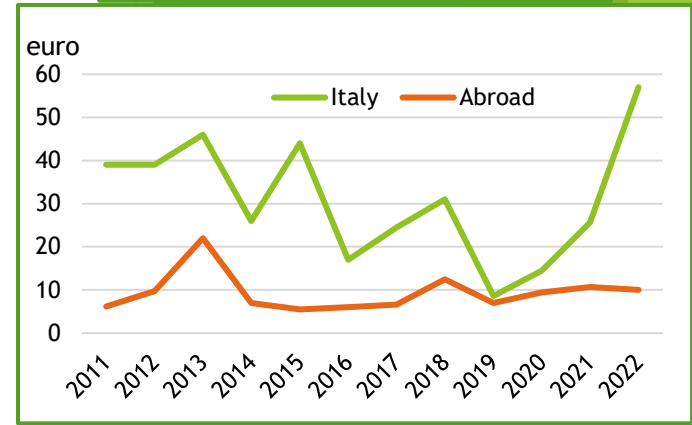


PERFORMANCE OF VOLUNTARY FOREST CARBON MARKET

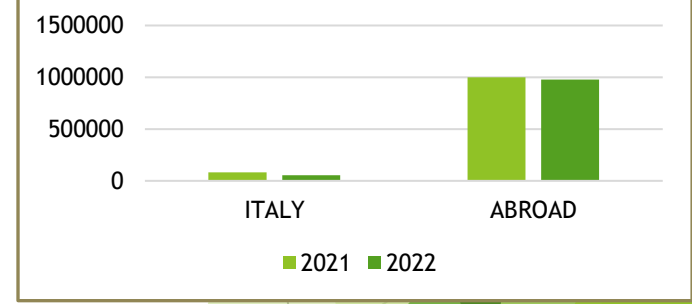
Volume and Price of Italy market



Prices of credits generated in Italy and abroad



Carbon credit generated and sold in Italy and abroad



TYPE OF CERTIFICATION



Total credit sold: 2.6Mtons
Average price 19 €/tons

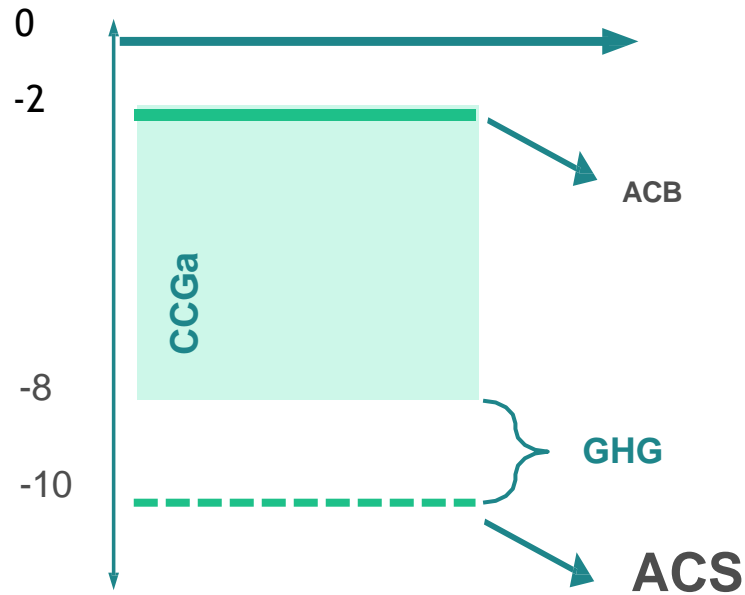
Source: Monitoring Carbon Center

PROPOSTA LINEE GUIDA MERCATO VOLONTARIO NAZIONALE AGRO-FORESTALE

Article 45, of Decree-Law No. 13 of February 24, 2023, provides for the establishment of the “Public registry of carbon credits generated on a voluntary basis by the national agroforestry sector at the CREA. The law requiring that credits meet the following requirements:

- they cannot be used in the EU ETS market, in the (CORSlA) market;
- they cannot be sold to foreign buyers and other states;
- they will have to be generated domestically;
- they will have to ensure a positive impact in the fight against climate change in compliance with Reg. (EU) 2021/2139 (DNSH);
- may be used for self-compensation or for sale to third parties;
- project will be geo-referenced in the **National Forest Map (SINFOR)** and the registry will be inside the **national agricultural information system (SIAN)**

Carbon credit accounting for forestry and agroforestry



Sustainable forest management project

The project envisages the implementation of sustainable forest management practices in addition to the Italy forest regulation:

- Improved coppice management with longer rotation
- Increase biomass in high forest;
- Thinning

Agroforestry project

The project involves the implementation of agroforestry practices:

- Hedges or rows
- Silvo-arable systems
- Silvo-pastoral systems

Examples

$$CCGr = 8 - 1 - 2 = 5$$

$$CCGa = 10 - 2 - 2 = 6$$

LEGENDA

<u>Baseline</u>	CCG=carbon credit generated
Pratica sostenibile	ACB = baseline carbon sequestration
-----	ACS = Sustainable carbon sequestration



PRINCIPLES FOR GENERATING FORESTRY CARBON CREDITS (IPCC 2006)

ADDITIONALITY : Financial, environmental and regulatory;

BASELINE: For afforestation activities, the baseline equals the baseline level of carbon removals in the Project area, in its absence (“business as usual”). For sustainable forest management it coincides with activities under regional regulations or national forest law.

PERMANENCE: Minimum duration 20 years - Monitoring plan : audit at the beginning of the project and every 5 /10 years - Buffer : Varies from 15 to 30% .

SUSTAINABILITY : The project must have positive impacts on ecosystem services. Also buyers before purchasing credits must calculate the company's carbon footprint, and be in possession of an emission reduction plan.

MERC APPROACH: Buyers will have to calculate their carbon footprint (Standard UNI 14064) and initiate a process to reduce their emissions (recommended approach [https://sciencebasedtargets.org/.](https://sciencebasedtargets.org/))

FOREST ELIGIBLE ACTIVITIES

IMPROVED FOREST MANAGEMENT		AFFORESTATION REFORESTATION	AGROFORESTRY	HARVEST WOOD PRODUCT
COPPICE MANAGEMENT	HIGH FOREST MANAGEMENT			
IMPROVED COPPICE MANAGEMENT WITH LONGER ROTATION	INCREASE OF BIOMASS IN HIGH FOREST	AFFORESTATION ON AGRICULTURAL OR FALLOW LAND OR AREAS TO BE RESTORED	SILVOARABLE SYSTEMS (MINIMUM 50 AND MAXIMUM 150 TREES FOR HECTARE)	WOOD PRODUCTS OF ITALIAN ORIGIN WHOSE LIFE CYCLE IS NOT LESS THAN 35 YEARS
COPPICE THINNING	THINNING OF HIGH FOREST	PERMANENT POLYCYCLIC PLANTATIONS ON AGRICULTURAL OR FOREST SURFACES	SILVOPASTORAL SYSTEMS (MINIMUM 50 AND MAXIMUM 150 TREES FOR HECTARE)	
CONVERSION FROM COPPICE TO HIGH FOREST	SANITATION AND REDUCTION FIRE RISK TREATMENTS	INSTALLATIONS WITH ENVIRONMENTAL FUNCTIONS: SHELTERBELT, BUFFER STRIPS AND ECOLOGICAL CORRIDORS		

INELIGIBLE ACTIVITIES

- Activities that generate negative environmental and/or social impacts.
- Reforestation in wetlands
- Afforestation and reforestation to replace natural or existing forests;
- Afforestation related to EIA , SEA, offsets... compulsory by law.
- Planting of invasive and non-native species;

AGRICULTURE ELIGIBLE ACTIVITY

AGRICULTURAL PRACTICES INCLUDED

- agroforestry.
- use of intercropping and cover crops;
- conservation tillage;
- conversion of land to permanent grassland.
conversion of cultivated land to fallow land;
- organic fertilisation;crop rotation.

AGRICULTURAL PRACTICES UNDER NEGOTIATION

- methane reductions from changes in feed or manure management;
- nitrous oxide reductions from fertiliser
- manure management;
- The use of biochar.

Certification Process

OCE
ACCREDITED
REG (CE) n. 765/2008

1

Verifies the correct calculation of credits

- Methodologies must be consistent with IPCC and national guidelines

2

Conduct audits

- An audit in the first 2 years after the start of the project and every 5/10 years thereafter

3

issues certification

- Certification for ex ante sale
- Certification for standard sale
- Certification for the sale of credits generated by HWP

Service Branding

CONCLUSIONI

- 1. Sequestration = emission reduction: Companies that buy carbon credits reduce emissions 2 times faster than those that do not buy them (Sylvera 2023)**
2. It must be emphasised that it is possible to certify and sell carbon credits every five years, but the project must have a positive balance in terms of carbon absorbed for the entire duration of the project.
3. Project costs: Project costs are high and can be met through cooperation between forest owners and farms. Forestry associations could play a key role in aggregating producers and managing sequestration projects.
4. The market is a tool to recognise good management practices and additional commitments made by the forest manager. It represents additional income.

Thank You

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<https://www.nucleomonitoraggiocarbonio.it/it/>



FARM VISITS, AUDITS AND ACTION PLANS IN GERMAN DAIRY FARMS

VERONA, ITALY

Mohammad Seyedalmoosavi and
Barbara Amon



What can bring the LIFE Carbon Farming project regarding the context in Germany?



- German participation is a small scale
 - will allow us to evaluate which measures are best suited to the German context.
 - will allow to follow closely the advances in terms of carbon certification and to see its applicability in the country.
 - Baseline for future Scale up
 - We will be a reference point for future projects, the lessons learned will be taken into account to formulate and execute new projects at the farm level.

LIFE Carbon Farming in Germany



▪ **Farming method:**

- Organic farms
- Conventional farms

▪ **Features:**

- Biogas
- Photovoltaics
- Low and high milk yield

Farm visits and progress of project



- 15 German farms are involved
- **First farm visit:** all farms have been visited for collecting data
- **Assesing farm data** using CAP2ER for all 15 farms
- **Second farm visit:** audits have been discussed with farmers
- **Third farm visit:** suggesting action plans to farmers
- **Partial budget** for all 15 farms
- **Simulation** for all 15 farms



Farm Birkhof



Livestock units



65,2 LU

Prim' Holstein - 66

My cash crops unit:



17,9 Ha

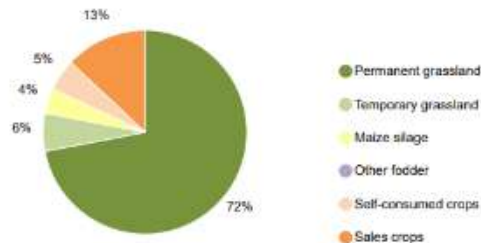
Farm in

Specialized breeding
Vulnerable Zone



My areas

100,5 ha of UAA *
of which 82,5 ha of MFA **
and 0,0 ha of pastoral areas



Farm Birkhof



Reference system: Plain <10% Maize

MY HERD



corrected milk sold*	Dairy cows	Production per cow	Production per ha	Age at 1 st calving	Apparent stocking rate
262 761	50	5 501	3 528	26,0	0,8
litres		Gross L / DC	L gross / ha dairy MFA	month	LU/ha dairy MFA

MY AREAS



Dairy UAA **	Dairy MFA	Permanent grassland	Temporary grassland	Hedges	Organic nitrogen
83	78	68	6	6 124	74
Ha	Ha	Ha	Ha	meters	kg N / ha dairy UAA **

* Corrected milk sold 40-33 g / kg - ** Dairy UAA = MFA from the dairy cattle unit + ha of self-consumed grains used by the dairy cattle unit

MY CASH CROPS UNIT

Reference system: Great East

MY AREAS



UAA sales crops *	Number of crops	Cereals	Spring crops	Industrial and special crops	Yield potential (cereals)
18	1	13	0	0,0	65,0
Ha		Ha	Ha	Ha	qx / ha

* Cash crops UAA = UAA without area for fodder and self-consumed grains for livestock

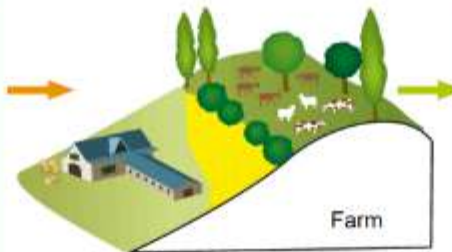


Farm Birkhof



Nitrogen balance at farm level

Inputs in kg N/ha UAA	
Concentrates	11
Fodder and straw	0
Mineral fertilizers	13
Imported effluents	0
Animals purchased	1
Symbiotic fixation	31
Atmospheric deposition	10



Outputs in kg N/ha UAA	
Milk	14
Meat	0
Wool	0
Exported effluents	0
Sales culture	19

$$\begin{array}{c} 66 \\ \text{kg N/ha UAA} \end{array} - \begin{array}{c} 33 \\ \text{kg N/ha UAA} \end{array} = \begin{array}{c} \text{Balance surplus} \\ 33 \text{ kg N/ha UAA} \end{array}$$

Some elements of interpretation:

- < 50 kg N/ha UAA
- between 50 and 100 kg N/ha UAA
- between 100 and 150 kg N/ha UAA
- > 150 kg N/ha UAA

$$\begin{array}{c} 33 \text{ kg} \\ \text{N/ha} \\ \text{UAA} \end{array} / \begin{array}{c} 66 \text{ kg} \\ \text{N/ha} \\ \text{UAA} \end{array} = \begin{array}{c} \text{Nitrogen} \\ \text{efficiency} \end{array} \quad 50\%$$



MILK PRODUCT RESULTS

Net carbon footprint



Net carbon footprint



GHG emissions*



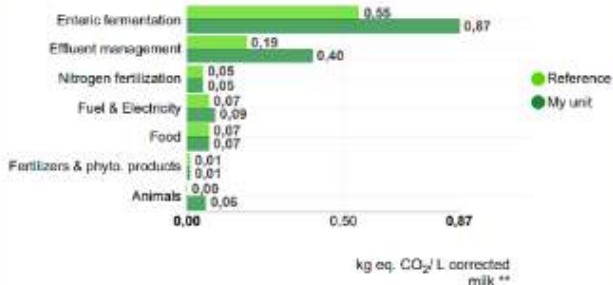
Carbon storage

32% of my GHG* emissions are offset by carbon storage

1,05 kg eq. CO₂/ L corrected milk **



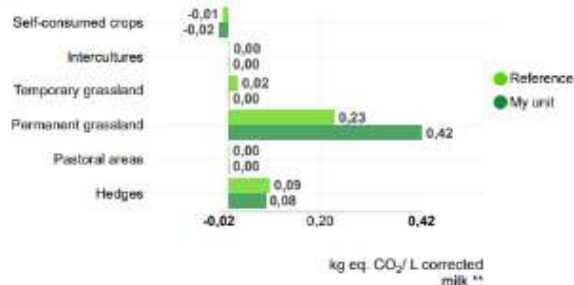
GHG emissions* (CH₄, N₂O and CO₂)



1,54 kg eq. CO₂/ L corrected milk **



Carbon storage



0,49 kg eq. CO₂/ L corrected milk **





CULTURES:

- Optimizing the use of effluents
- Introducing alfalfa in the rotation
- Supplementing plant cover crops with legumes

RATION:

- Improving concentrates use efficiency in the dairy females ration – Reducing concentrate wastage
- Optimizing the nitrogen content of the ration
- Producing feed on the farm - autonomy in concentrates

Farm Birkhof



Effluent management

- Grazing duration - dairy cow



- Slurry pit cover



- Liquid effluent spreading equipment



- Incorporation period

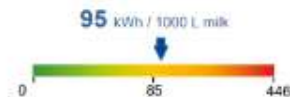


Energies

- Fuels



- Electricity





Action plans

HERD:

- Optimizing milk production per head
- Increasing milk production efficiency by improving feeding management
- Controlling lameness

ENERGY AND EFFLUENT MANAGEMENT:

- Covering the slurry pit and burning the methane with a flare
- Reducing the number of days in the barn
- Reducing fuel consumption

Livestock units



96,2 LU

Jersiaise - 15

My cash crops unit:



48,8 Ha

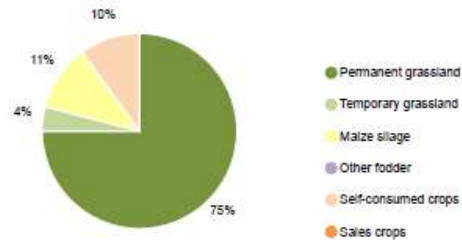
Farm in

Specialized breeding
Vulnerable Zone



My areas

114,0 ha of UAA *
of which 103,0 ha of MFA **
and 0,0 ha of pastoral areas



Spinner



Reference system: Plain 10-30% Maize

MY HERD



corrected milk sold*	Dairy cows	Production per cow	Production per ha	Age at 1 st calving	Apparent stocking rate
611 836	75	7 452	10 326	27,0	1,8
litres		Gross L / DC	L gross / ha dairy MFA	month	LU/ha dairy MFA

MY AREAS



Dairy UAA **	Dairy MFA	Permanent grassland	Temporary grassland	Hedges	Organic nitrogen
65	54	40	2	232	203
Ha	Ha	Ha	Ha	meters	kg N / ha dairy UAA **

* Corrected milk sold 40-33 g / kg - ** Dairy UAA – MFA from the dairy cattle unit + ha of self-consumed grains used by the dairy cattle unit

MY CASH CROPS UNIT

Reference system: Great East

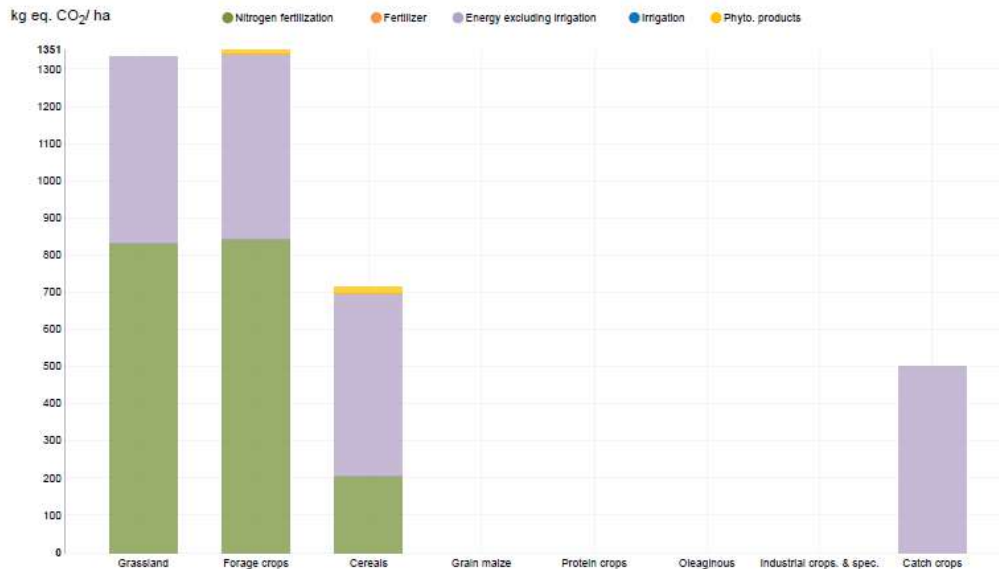
MY AREAS



UAA sales crops *	Number of crops	Cereals	Spring crops	Industrial and special crops	Yield potential (cereals)
49	0	0	0	0,0	80,0
Ha		Ha	Ha	Ha	qx / ha

* Cash crops UAA = UAA without area for fodder and self-consumed grains for livestock

Spinner



GHG emissions kg eq. CO₂/ ha

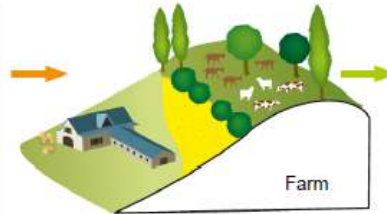
	Grassland	Forage crops	Cereals	Grain maize	Protein crops	Oleaginous	Industrial crops. & spec.	Catch crops
My farm	1 332	1 350	713	0	0	0	0	500
Reference	541	1 167	2 151	2 089	700	1 509	1 844	71
Difference (%)	146	16	-67					604



Spinner



Inputs in kg N/ha UAA	
Concentrates	0
Fodder and straw	7
Mineral fertilizers	0
Imported effluents	199
Animals purchased	0
Symbiotic fixation	42
Atmospheric deposition	10



Outputs in kg N/ha UAA	
Milk	29
Meat	0
Wool	0
Exported effluents	44
Sales culture	62

$$257 \text{ kg N/ha UAA} - 135 \text{ kg N/ha UAA} = 122 \text{ kg N/ha UAA}$$

Balance surplus 122 kg N/ha UAA

Some elements of interpretation:

	< 50 kg N/ha UAA
	between 50 and 100 kg N/ha UAA
	between 100 and 150 kg N/ha UAA
	> 150 kg N/ha UAA

$$135 \text{ kg N/ha UAA} / 257 \text{ kg N/ha UAA} = \text{Nitrogen efficiency } 53\%$$

Spinner



Net carbon footprint

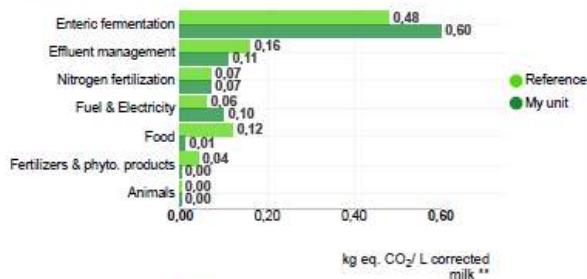


1% of my GHG* emissions are offset by carbon storage

0,88 kg eq. CO₂/ L corrected milk **



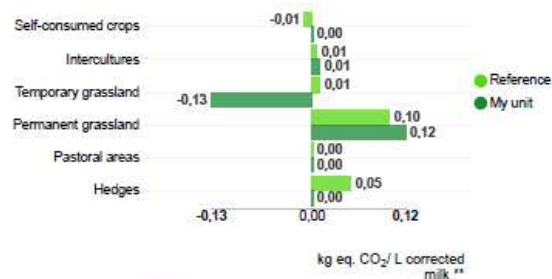
GHG emissions* (CH₄, N₂O and CO₂)



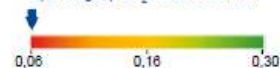
0,89 kg eq. CO₂/ L corrected milk **



Carbon storage



0,01 kg eq. CO₂/ L corrected milk **



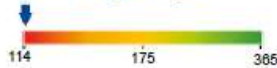
Spinner



Effluent management

- Grazing duration - dairy cow

0 days / DC / year



- Slurry pit cover

Artificial cover



- Liquid effluent spreading equipment

Line spreading booms



- Incorporation period

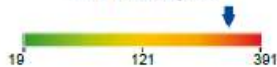
within 12 hours



Energies

- Fuels

309 L / ha dairy UAA



- Electricity

80 kWh / 1000 L milk





CULTURES:

- Reasoning and adjusting nitrogen fertilization
- Optimizing the use of effluents
- Planting hedges

HERD:

- Increasing milk production efficiency by improving feeding management

ENERGY AND EFFLUENT MANAGEMENT:

- Reducing fuel consumption



No. 809 associated breeding farms, of which, No. 726 farms adhering to the Optional Labeling Disciplinary recognized by Mipaaf with the unique code IT010ET, of which, No. 393 adhering to the “Verified Quality” and “Italian Seal” Disciplinary

- n. 29 qualified feed mills;
- n. 20 qualified slaughtering/slaughtering plants;
- n. 185 qualified sales outlets;
- n. 286,000 total cattle produced by members in 2023.



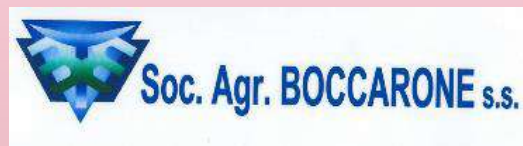


***PARTICIPATION IN PROJECTS FOR RESEARCH AND EXPERIMENTATION:
UNICARVE ACTIVELY PARTICIPATES IN EUROPEAN, NATIONAL AND
REGIONAL RESEARCH AND EXPERIMENTATION PROJECTS. THE
OBJECTIVE IS TO IDENTIFY THE BEST PRACTICES THAT LIVESTOCK
COMPANIES, SPECIALIZED IN BEEF CATTLE BREEDING, CAN APPLY. IN
PARTICULAR, RESEARCH THAT CONCERNS THE IMPROVEMENT OF
ANIMAL WELFARE AND ENVIRONMENTAL SUSTAINABILITY IN CATTLE
BREEDING. CONTINUOUS COLLABORATIONS WITH THE UNIVERSITY OF
PADOVA, CREA, CRPA, ISMEA AND INITIATIVES FINANCED BY THE VENETO
REGION AND THE EUROPEAN COMMISSION .***





"SUSTAINABLE FARMING" REGULATIONS BRAND DEALERS





A.O.P. ITALIA ZOOTECNICA is an Association of Producer Organizations recognized by DECREE No. 32 of March 14, 2019 by the VENETO REGION, pursuant to EU Reg. No. 1308/2013, DM No. 1108/2019, DM No. 387/2016, National Guidelines of 17.5.2016 for the application of DM No. 387/2016 and DGR No. 1256/2015, for the BOVINE MEAT sector. It was established as an agricultural cooperative with limited liability (abbreviated as AOP Italia zootechnica).





Carbon Farming: interventions on the monitored farms

- First arrival: calf control and health management
- Rationing: ration management according to growth stages and automation
- Calf health control on arrival and during fattening
- Structural interventions to improve welfare
- Energy production from natural sources
- Distribution of livestock wastes by mean of localized distribution systems
- Distribution of irrigation water with low-consumption systems
- meadow restoration and woodland restoration interventions



Health and welfare management:

- Health management at calves arrival
- Space allowance per head
- Natural or forced ventilation
- Management of feeding plans



- *Stages of nasal vaccination*
- *Weighing*
- *Eartag and bolus check*





RATION: diversification of feed stages according to weight and age of cattle and automation of distribution





Control of cattle health:

1. Weighing water point;
2. Catching structure with weighing
3. Biometric collars





ANIMAL WELFARE:
Destratifiers fans



Flooring with rubber mats





Biogas plants filled with wastes



Photovoltaic systems



Management of livestock wastes to optimize nutritional intake and reduce distribution costs





Irrigation with water saving systems

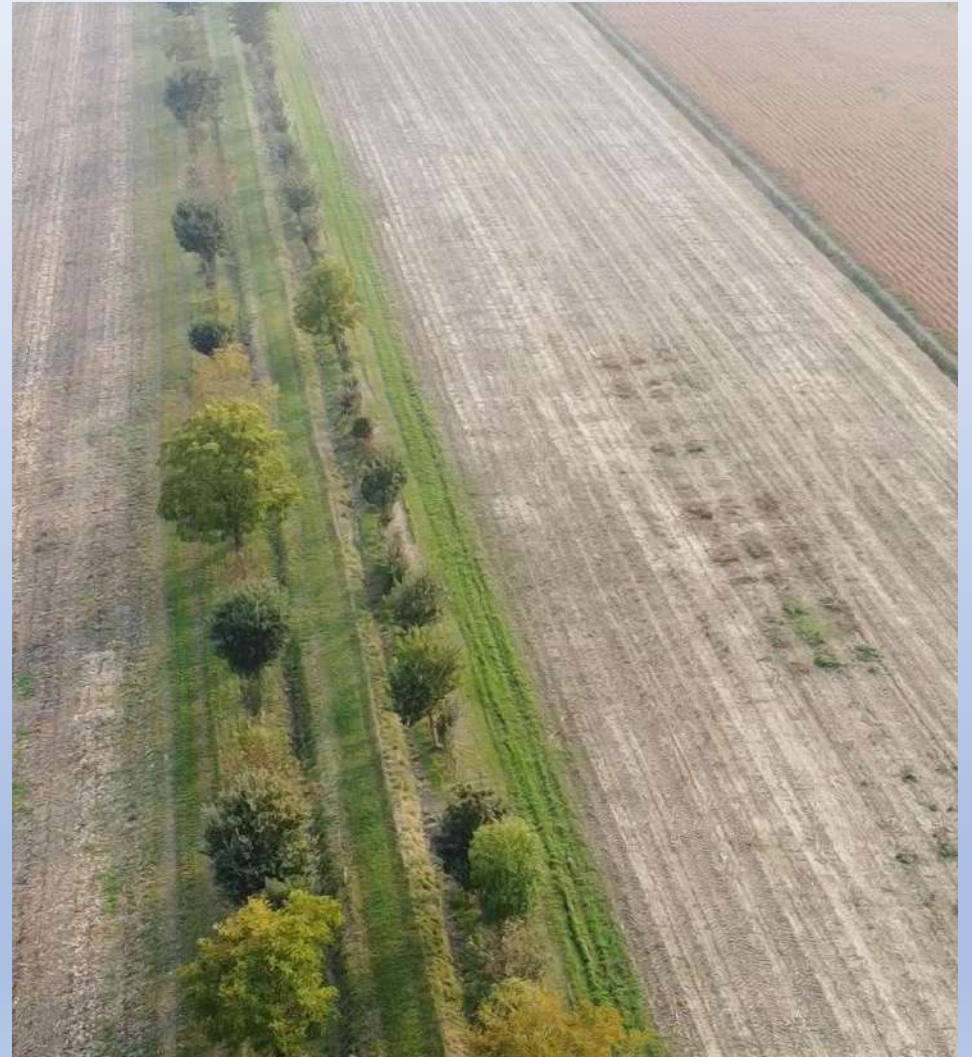
Pivot water distribution system



Electric activated water tubes distribution



Land management with meadows
alternating with hedge rows





INTERVENTI CARBON FARMING: *CONCLUSIONI*

- THE INTERVENTIONS ADOPTED ARE THE RESULT OF ENTREPRENEURIAL CHOICES AIMED AT IMPROVING FARM EFFICIENCY AND PROFITABILITY;
- ONLY SOME OF THESE INTERVENTIONS HAVE FINANCIAL SUPPORT (40% CONTRIBUTION - MAX 600,000€ - 6 YEARS PER FARM).
- I HIGHLIGHT TO THE PROPONENTS OF “CARBON FARMING”, THAT 2021 WAS THE YEAR OF COVID, AND IT WAS NOT EASY TO IDENTIFY INTERVENTIONS AND FARMS THAT COMPLY WITH THE PROJECT
- REQUIREMENTS; I THANK ALL THE ENTREPRENEURS WHO HAVE AGREED OVER THE YEARS TO COOPERATE FOR THE SUCCESS OF THESE PROJECTS: (BEEF CARBON - CARBON FARMING);
- I WOULD LIKE TO POINT OUT, THAT THE “AKIS” PROJECTS CURRENTLY FUNDED IN THE REGIONAL AREA, CAN ACCESS GRANTS FOR COMPANIES THAT PARTICIPATE IN DATA COLLECTION AND THIS COULD BE SOMETHING TO TAKE INTO ACCOUNT IN FUTURE INTERVENTIONS;



INTERVENTI CARBON FARMING: *CONCLUSIONI*

- THE RESULTS OF THESE INTERVENTIONS MUST HAVE MAXIMUM DISSEMINATION IN ORDER TO ALLOW KNOWLEDGE OF THE TECHNIQUES, TOOLS USEFUL FOR ACHIEVING THE OBJECTIVES;
- FOR THIS, IN THE DRAFTING OF THE PROJECTS, AN ADEQUATE BUDGET MUST BE PROVIDED FOR THE DISSEMINATION OF THE RESULTS, EVEN USING SPECIALIZED AND NON-SPECIALIZED NEWSPAPERS, SO THAT EVEN ORDINARY CITIZENS, KNOW HOW MUCH AND WHAT EFFORTS ARE MADE BY FARMERS TO IMPROVE THEIR FARMS, THE LIVING CONDITIONS OF THEIR ANIMALS AND THE ATTENTION TO AIR, SOIL AND WATER, IN ORDER TO IMPROVE THE ENVIRONMENT IN WHICH WE ALL LIVE.

OBJECTIVE: SUSTAINABILITY

SOCIAL

ECONOMIC

ENVIRONMENTAL

Thanks for your attention





Carbon Farming: sostenibilità ambientale dell'allevamento bovino, azioni di mitigazione e modello di mercato di crediti di carbonio

Progetto LIFE CARBON Farming (LIFE20 CCM/FR/001663)
Azione C5 Setting up a EU low carbon farming network

Ruolo delle associazioni dei bovini da carne e da latte per la sostenibilità ambientale

Camera di Commercio Industria Artigianato Agricoltura di Verona
14 ottobre 2024



CHI E' ASPROCARNE

Organizzazione dei Produttori di carne bovina del Piemonte

Oggi Asprocarne è l'unica Organizzazione di Produttori (OP) operativa in Piemonte

conta 400 soci che allevano oltre 130.000 capi all'anno, poco meno del 50% della produzione regionale

Commercializza direttamente il prodotto dei soci con l'obiettivo di aggregare l'offerta e valorizzare la produzione

Fornisce servizi specializzati allo scopo di migliorare e qualificare la produzione dei soci





SIAMO PRESENTI E OPERATIVI NELLE PIU' IMPORTANTI ORGANIZZAZIONI NAZIONALI DELLA CARNE BOVINA

- **AOP ITALIA ZOOTECNICA**, nata nel 2006 come comitato delle Organizzazione Produttori italiane, trasformata in Consorzio, oggi è Associazione delle OP (Organizzazioni dei Produttori) italiane riconosciuta dal Ministero con DM
- **CONSORZIO SIGILLO ITALIANO** riconosciuto con DM dal Ministero per promuovere e valorizzare i prodotti SQNZ (Vitellone e Scottona allevati a cereali, Fassone Piemontese)
- **OI (Organizzazione Interprofessionale) INTERCARNEITALIA** riconosciuta con DM dal Ministero come prima e unica organizzazione interprofessionale della carne bovina in Italia

TIPO ATTIVITA'

ALLEVAMENTO

ORIENTAMENTO PRODUTTIVO

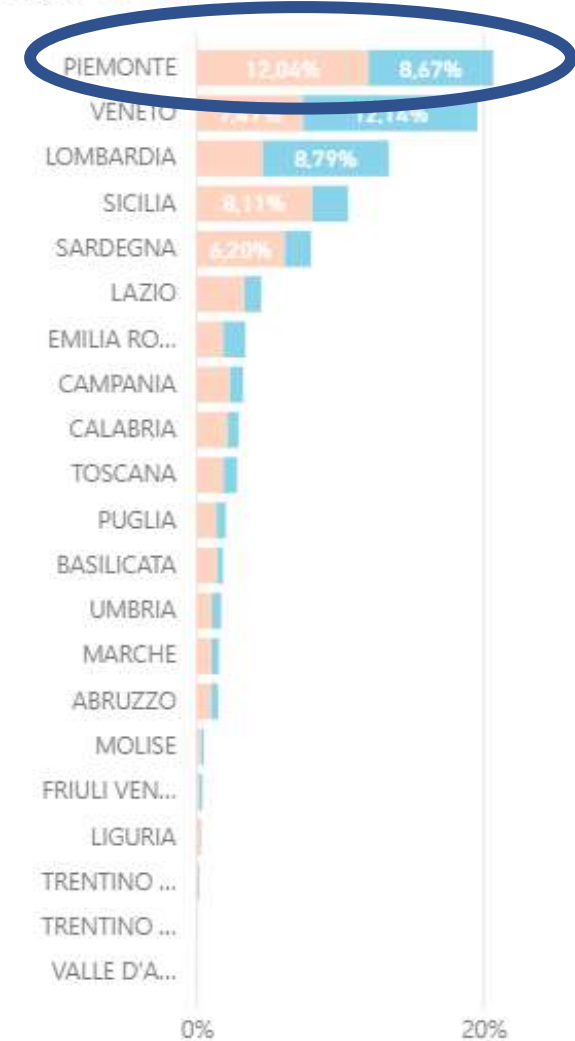
CARNE

NUMERO CAPI

2.452.463

%NUMERO CAPI SUL TOTALE per REGIONE e SESSO

SESSO F M

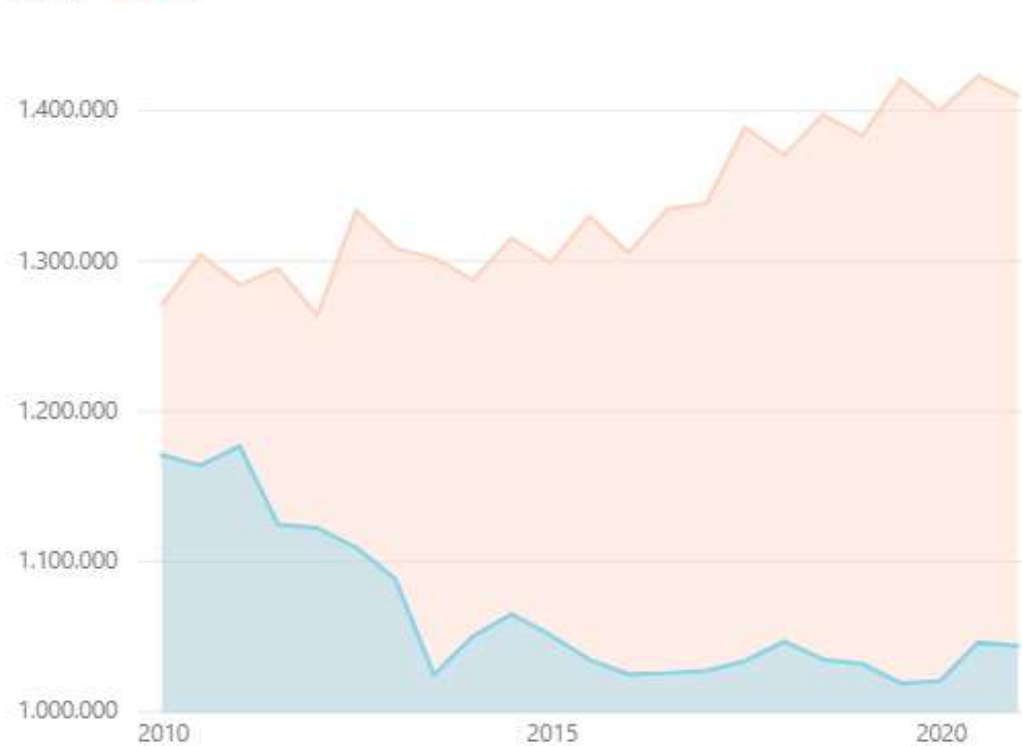
**REGIONE**

Tutte

ASL

Tutte

SESSO F M



Il Piemonte, con 512.589 capi, è la 1^a Regione d'Italia per numero totale di capi allevati ad indirizzo produttivo carne

CONSISTENZA CAPI PER CLASSI DI ETÀ

SPECIE

BOVINI

TIPO ATTIVITA'

ALLEVAMENTO

ORIENTAMENTO PRODUTTIVO

CARNE

NUMERO CAPI

579.571

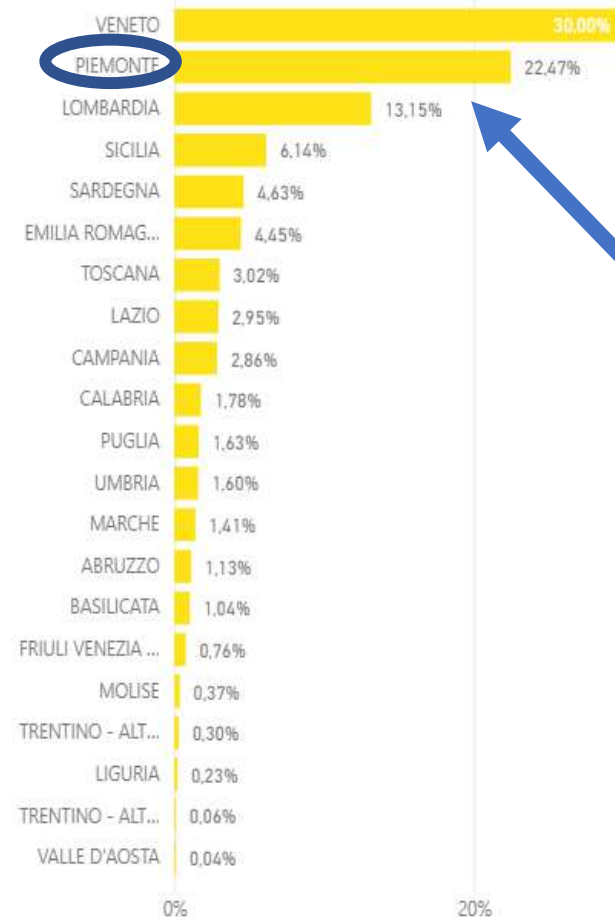
Drill su

CLASSE DI ETÀ REGIONE	1 - DA 0 A 6 MESI		2 - DA 6 A 12 MESI		3 - DA 12 A 24 MESI		4 - OLTRE 24 MESI	
	F	M	F	M	F	M	F	M
ABRUZZO	2.995	3.859	3.083	3.921	3.468	3.082	16.605	712
BASILICATA	2.673	2.677	3.770	3.470	4.117	1.889	26.069	1.411
CALABRIA	3.960	4.558	6.273	8.040	6.427	3.893	37.369	1.996
CAMPANIA	4.976	5.945	7.416	7.726	9.537	7.051	35.975	2.058
EMILIA ROMAGNA	4.948	10.126	10.636	12.170	12.010	13.791	19.024	1.841
FRIULI VENEZIA GIULIA	367	627	1.291	2.177	1.720	2.670	1.758	188
LAZIO	6.169	8.182	8.030	8.405	9.611	7.459	59.453	4.191
LIGURIA	553	497	776	694	912	394	4.658	237
LOMBARDIA	17.178	148.731	34.230	32.552	43.824	32.386	18.583	1.980
MARCHE	3.025	3.511	3.286	3.956	4.062	4.100	16.533	827
MOLISE	898	2.088	1.074	1.538	1.161	976	5.360	384
PIEMONTE	33.529	55.354	47.198	71.131	50.149	80.107	164.341	6.084
PUGLIA	3.653	5.660	5.649	4.731	5.067	4.375	20.623	1.086
SARDEGNA	12.372	11.481	15.227	13.369	16.832	10.004	107.587	9.948
SICILIA	18.237	18.785	25.354	25.466	24.048	11.543	131.242	5.425
TOSCANA	4.716	5.188	8.359	8.201	9.033	8.499	25.003	1.476
TRENTINO - ALTO ADIGE (BZ)	24	18	87	179	186	138	293	38
TRENTINO - ALTO ADIGE (TN)	338	444	1.151	778	857	853	944	86
UMBRIA	3.047	3.727	3.320	5.428	3.751	5.529	17.308	980
VALLE D'AOSTA	77	81	142	57	175	37	295	4
VENETO	31.929	88.189	68.223	104.650	70.638	103.210	12.517	1.794
Totale	155.664	379.728	254.575	318.639	277.585	301.986	721.540	42.746

%NUMERO CAPI SUL TOTALE per REGIONE e CLASSE DI ETÀ

CLASSE DI ETÀ

● 3 - DA 12 A 24 MESI

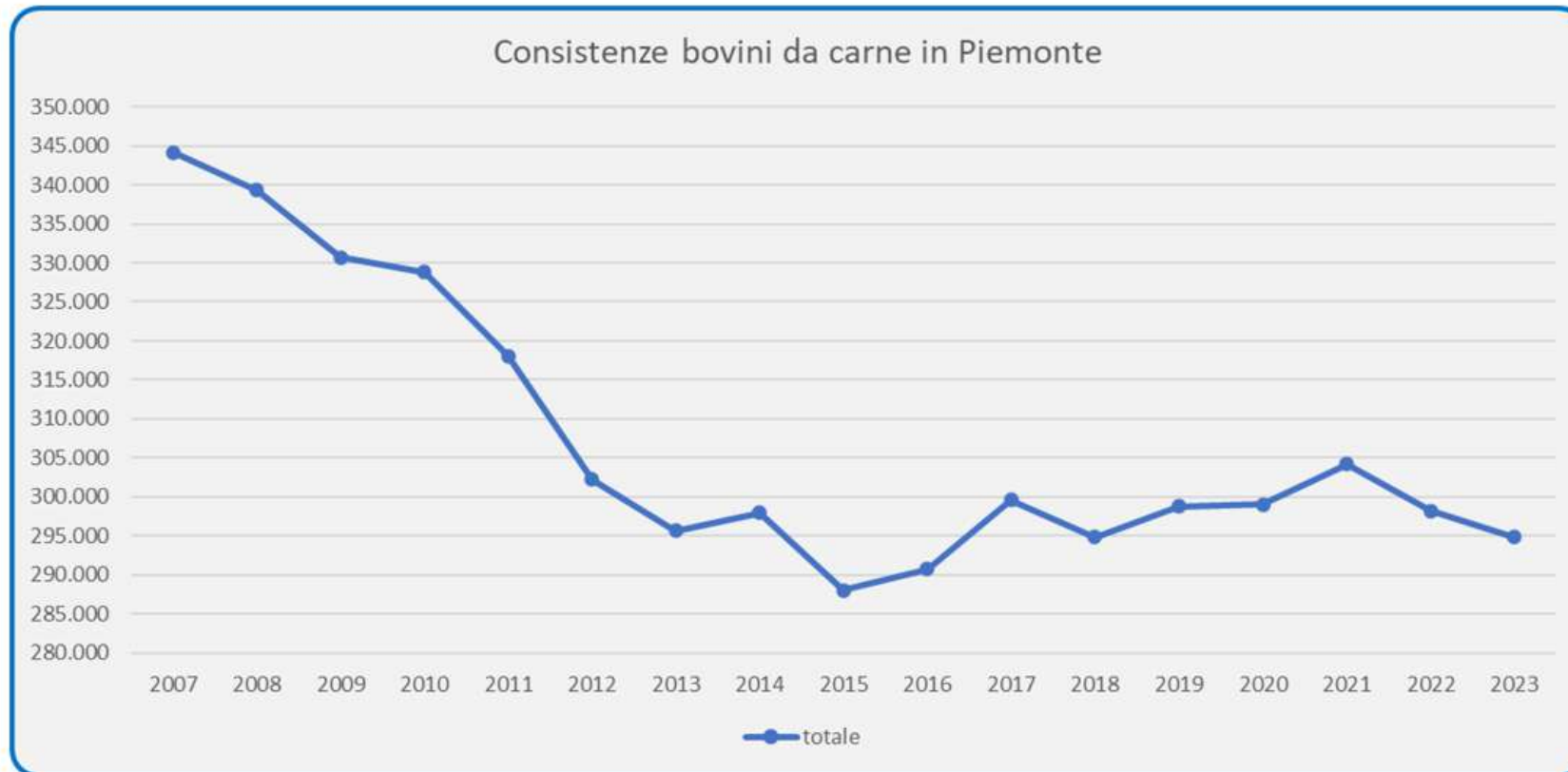


La seconda
se si
considera
solamente
la
categoria
Bovino
adulto
Vitellone

consistenze in calo nel 2023

nella tabella i capi allevati sotto i 24 mesi divisi per razza

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	diff %
piemontese	158.590	160.769	154.664	155.495	154.490	150.483	146.306	146.494	145.689	143.926	144.498	150.907	152.064	151.989	145.950	150.297	140.321	-7,11
blonde d'aquitaine	63.419	51.230	53.566	51.089	49.153	50.136	47.691	47.999	46.856	46.192	50.653	46.780	41.888	40.123	39.851	38.733	38.819	0,22
limousine	42.084	42.618	40.025	39.899	39.785	37.963	37.872	41.180	36.693	42.243	44.216	38.357	40.574	41.011	41.376	42.780	42.463	-0,75
charolaise	18.637	23.723	21.195	22.850	19.740	14.980	14.349	12.776	11.078	9.725	8.859	6.527	9.387	9.151	8.920	6.534	6.896	5,25
incroci	61.456	60.996	61.287	59.475	54.911	48.658	49.500	49.511	47.763	48.652	51.352	52.269	54.874	56.796	68.092	59.910	66.329	9,68
totale	344.186	339.336	330.737	328.808	318.079	302.220	295.718	297.960	288.079	290.738	299.578	294.840	298.787	299.070	304.189	298.254	294.828	-1,16



CONSISTENZA CAPI BOVINI E BUFALINI PER RAZZA

REGIONE

PIEMONTE

ASL

Tutte

PROVINCIA

Tutte

DATA RIFERIMENTO

30/06/2024

SPECIE

BOVINI

TIPO ATTIVITA'

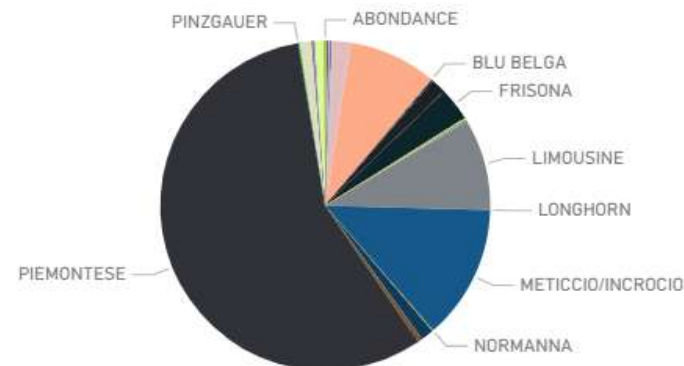
ALLEVAMENTO

ORIENTAMENTO

CARNE

NUMERO CAPI per RAZZA

RAZZA	1 - DA 0 A 6 MESI	2 - DA 6 A 12 MESI	3 - DA 12 A 24 MESI	4 - OLTRE 24 MESI	Totale
PIEMONTESE	58.588	36.331	51.562	128.095	274.576
METICCIO/INCROCIO	21.859	12.648	15.671	13.689	63.867
LIMOUSINE	693	7.722	32.618	2.493	43.526
BLONDE	976	17.571	21.742	1.353	41.642
D'AQUITAINE/GARONNESE					
FRISONA	11.467	2.090	1.376	589	15.522
AUBRAC	18	333	7.988	482	8.821
CHAROLAIS	11	356	6.344	291	7.002
PEZZATA ROSSA D'OROPA	987	374	746	4.003	6.110
SPRINZEN PUSTERTALER	1.216	438	837	3.123	5.614
VALDOSTANA PEZZATA ROSSA	861	327	563	2.592	4.343
PEZZATA ROSSA ITALIANA	647	370	327	994	2.338
SIMMENTAL					
ALTRE RAZZE PEZZATE NERE	1.033	45	7	15	1.100
ANGUS	138	89	253	425	905
HIGHLAND	103	66	124	504	797
VALDOSTANA PEZZATA NERA	145	42	157	448	792
VALDOSTANA CASTANA	121	44	107	500	772
BRUNA	188	78	94	315	675
ALTRE RAZZE PEZZATE ROSSE	122	70	69	398	659
GRIGIA ALPINA	60	31	33	523	647
SALERS	5	155	332	42	534
ALTRE RAZZE	6	39	319	51	415
BLU BELGA	68	58	168	66	360
PARTHENAISE		68	246	3	317
Totale	99.505	79.471	142.160	161.657	482.793



ELENCO DELLE 5 RAZZE PIU' DIFFUSE

PIEMONTESE

274.576
TOTALE CAPI

METICCIO/INCROCIO

63.867
TOTALE CAPI

LIMOUSINE

43.526
TOTALE CAPI

BLONDE D'AQUITAINE/GARONNESE

41.642
TOTALE CAPI

FRISONA

15.522
TOTALE CAPI

Dati elaborati il 30/06/2024

LA SOSTENIBILITA' SECONDO ASPROCARNE

1. valorizzazione del territorio
2. alta produttività
3. selezione dei fornitori
4. riduzione carbon foot print

LA VOCAZIONE DI UN TERRITORIO: il Piemonte è la prima regione in Italia per numero di vacche nutrici

In Italia sono presenti circa 374.000 vacche nutrici

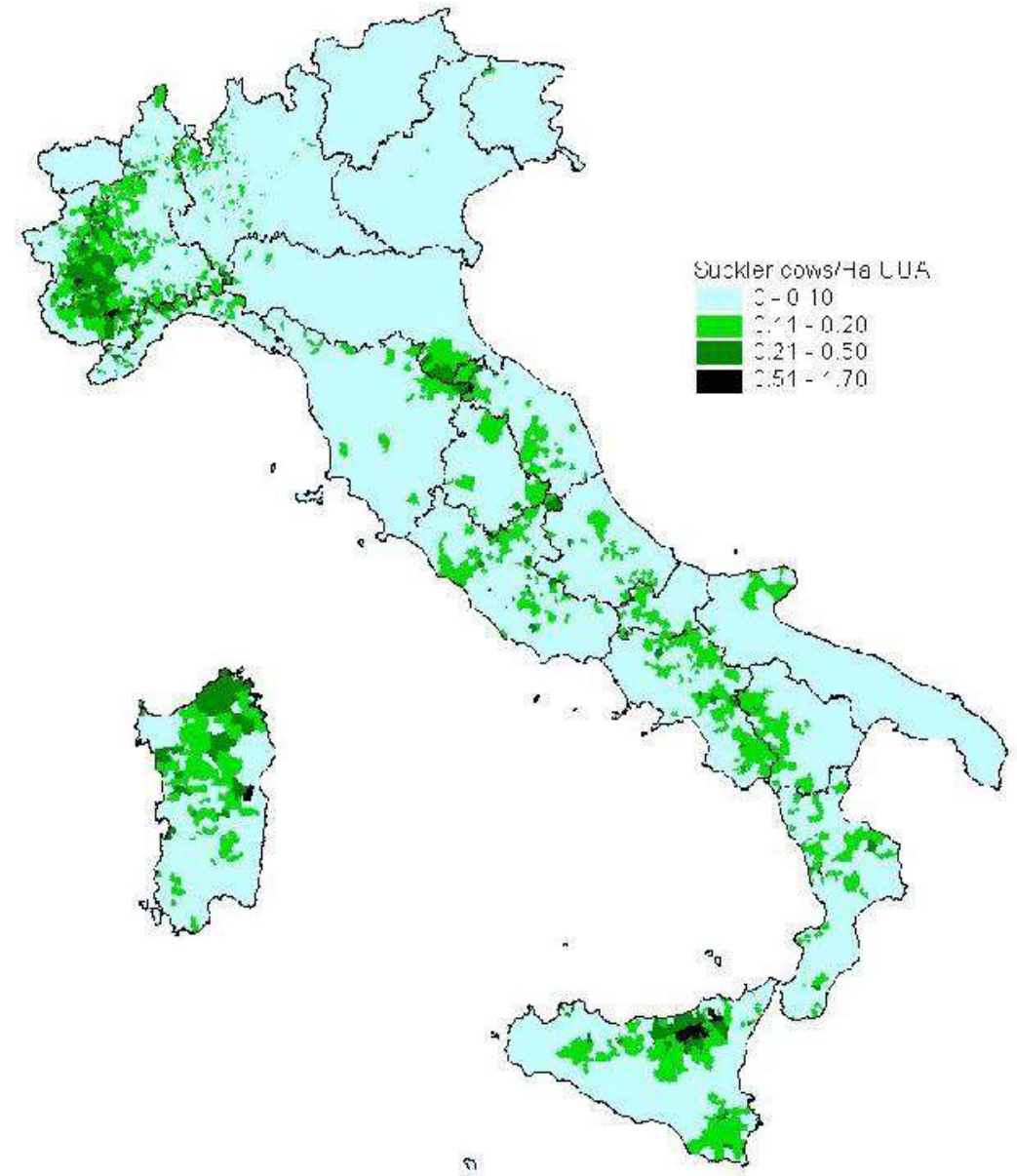
Il Piemonte è la Regione con il maggior numero di vacche nutrici in Italia (41%) seguono la Sicilia (18%) e la Sardegna (16%)

Razza Piemontese circa 300.000 di cui 150.000 vacche nutrici

Allevate in circa 4.000 aziende di piccola e media dimensione a conduzione familiare

Taglia media degli allevamenti 35 vacche

Largo utilizzo del pascolo sia in pianura che in alpeggio estivo



RAZZE SPECIALIZZATE PER INDICI DI ACCRESCIMENTO SUPERIORI:

in Piemonte oltre il 70% dei Vitelloni maschi e femmine allevati per la produzione di carne appartengono alle razze Piemontese, Blonde d'Aquitaine e Limousine

Razze con accrescimenti medi giornalieri superiori a 1,4 kg con punte di 1,7 kg

Rese alla macellazione minime del 63% con punte al 70% per la razza Piemontese

Utilizzo di razioni alimentari a minor impatto, aumento dell'amido – riduzione della proteina attraverso l'utilizzo di integratori specifici

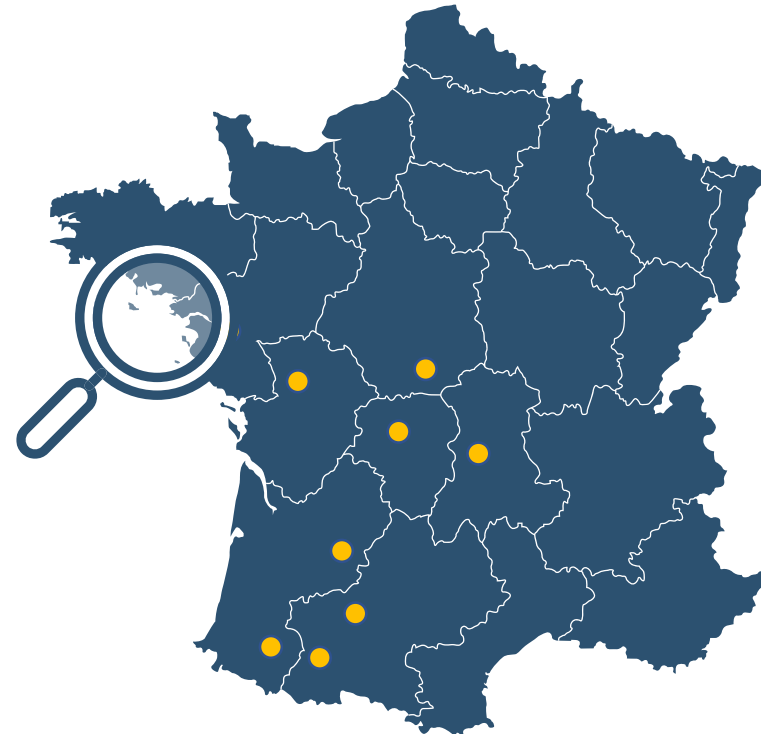


PER UNA CARNE SOSTENIBILE LA PRIMA SCELTA SONO I FORNITORI

Il servizio tecnico di Asprocarne si occupa della **selezione dei fornitori dei vitelli da ristallo** in Francia, Irlanda e Italia.

Una volta validati i fornitori e selezionati gli allevamenti, vengono sottoscritti appositi protocolli di gestione dei capi attraverso procedure che prevedono il **condizionamento dei vitelli per un periodo minimo di 80 giorni**.

In questa fase vengono concordati i piani di vaccinazione e gli eventuali trattamenti sanitari necessari, i piani alimentari specifici e la gestione del management aziendale.



Il Progetto LIFE BEEF CARBON

Gennaio 2016 – Dicembre 2020



4 paesi europei (Francia, Irlanda, Italia e Spagna) **57 beneficiari** (centri di ricerca, camere dell'agricoltura, cooperative, produttori di carne italiani e spagnoli)



- **Riduzione del carbon footprint nei bovini da carne del 15%**
- **Nuovo progetto per i prossimi 6 anni Life Carbon Farming**



LA SOSTENIBILITA' E IL PROGETTO «SIGILLO ITALIANO – ALLEVAMENTI SOSTENIBILI» tutto il lavoro di Asprocarne e dei soci allevatori si concretizza nel marchio



OBIETTIVO PRINCIPALE: RENDERE RICONOSCIBILE IL
PRODOTTO NAZIONALE

1. AGGREGAZIONE DELL'OFFERTA
2. COORDINAMENTO COMMERCIALE TRA O.P. NAZIONALI
3. RICONOSCIBILITA' DEL PRODOTTO ATTRAVERSO UN
SOLO MARCHIO
4. PROMOZIONE DEL PRODOTTO A MARCHIO
5. VALORIZZAZIONE DELLE PRODUZIONI CERTIFICATE SQNZ



GRAZIE PER L'ATTENZIONE

simone.mellano@asprocarne.com

www.asprocarne.com

Carbon Farming: sostenibilità ambientale dell'allevamento bovino, azioni di mitigazione e modello di mercato di crediti di carbonio

(LIFE20 CCM/FR/001663)

Verona - 14 ottobre 2024

Farming and tanning

*Ideas of intersectoral cooperation
to reduce greenhouse gas emissions*

Verona – 2024 / 10 /14

Table of contents

01

The Italian tanning
industry

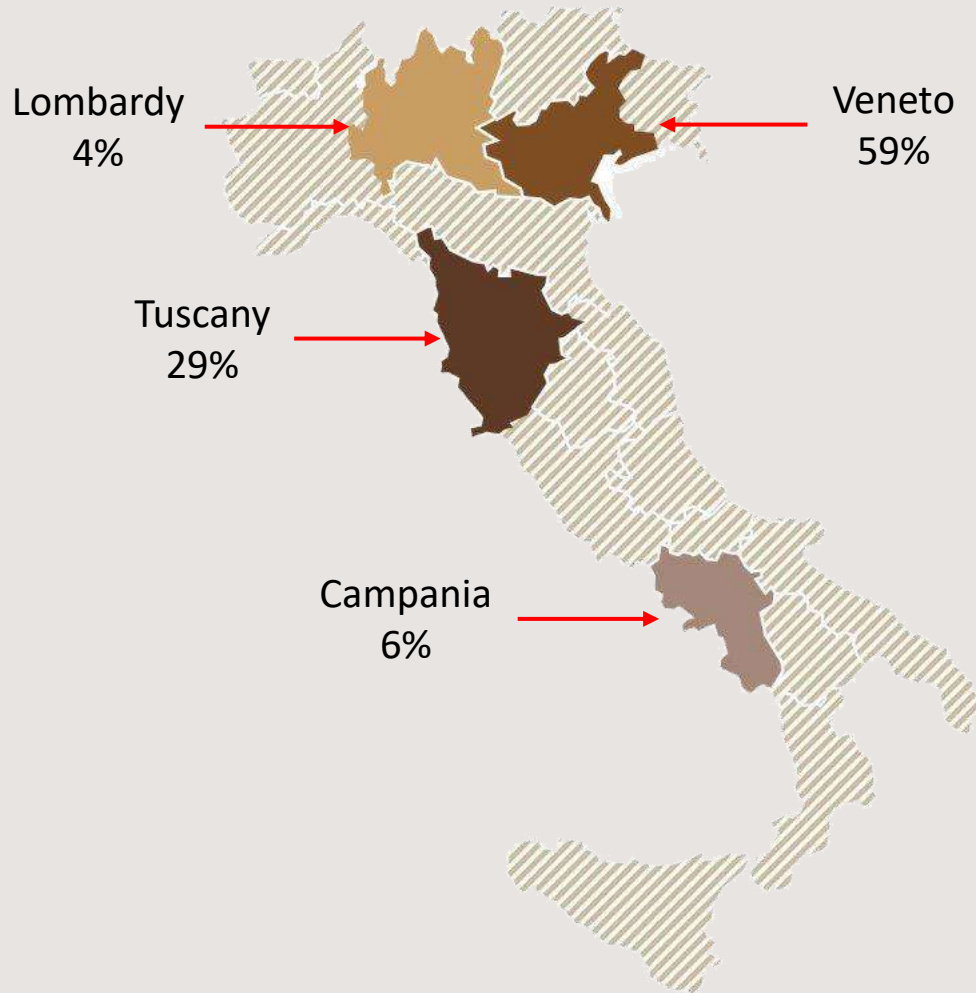
02

Gruppo Mastrotto

03

Farming sector and
tanning sector
cooperation

The Italian tanning industry



1.139 companies



17.882 workers



4.3 billion € (revenues)



62% of EU leather value production

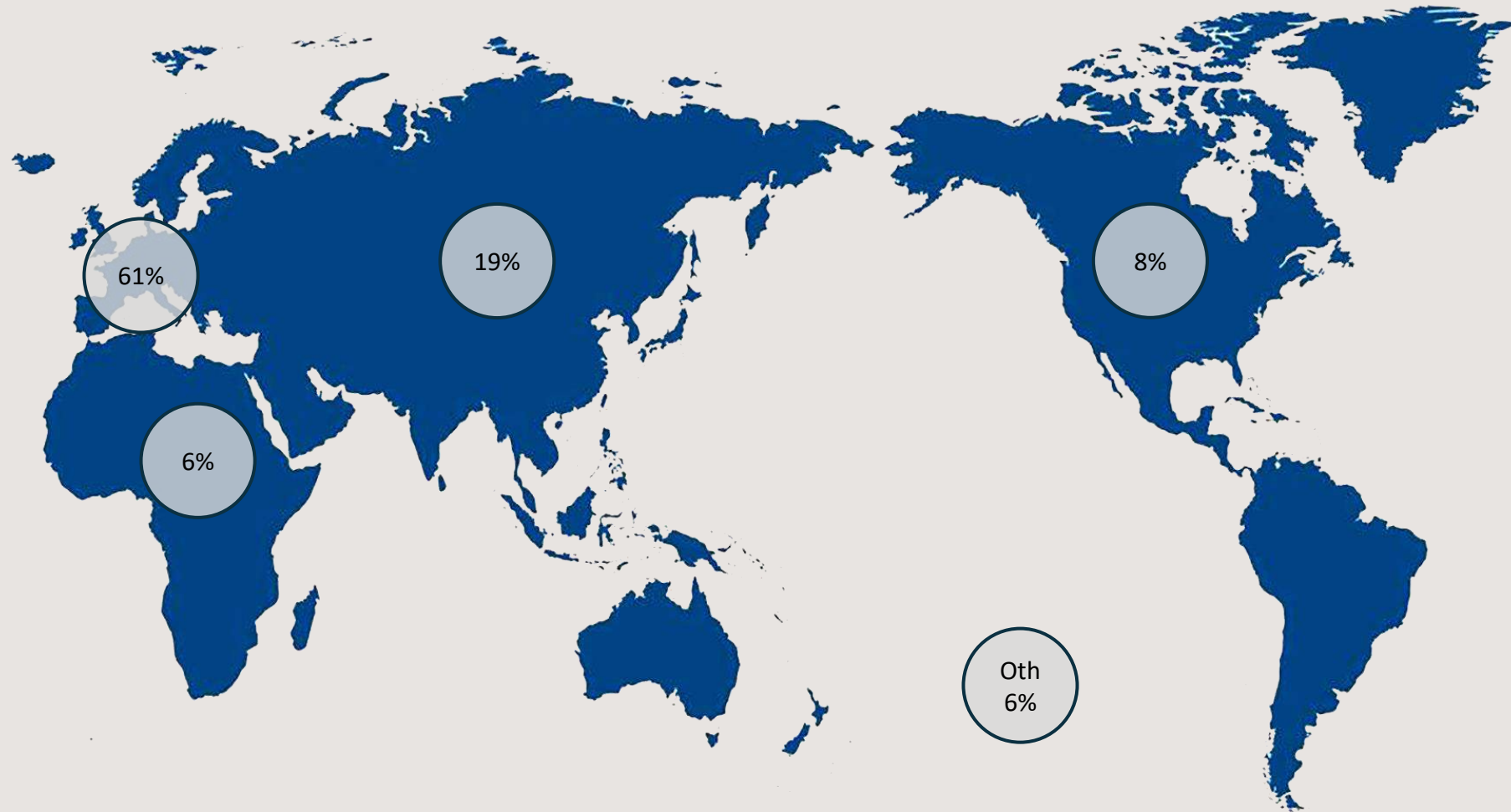


25% of World leather value production

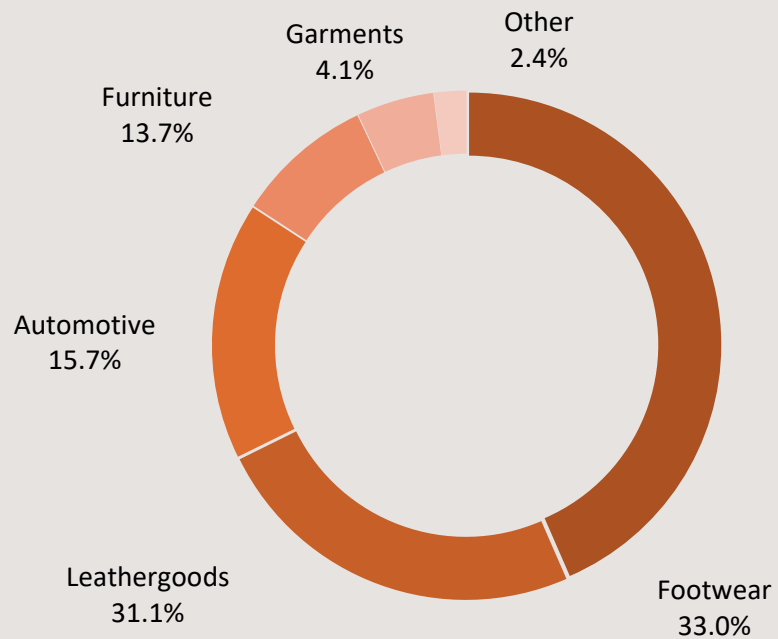


2.9 billion € (export) - 119 countries

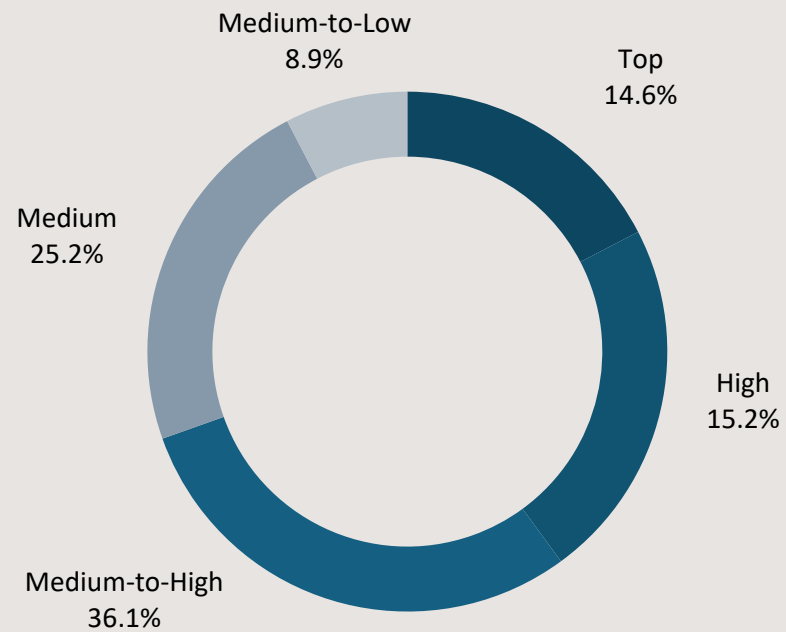
Export: 119 countries / 70% of total sales (double than 20 years ago)



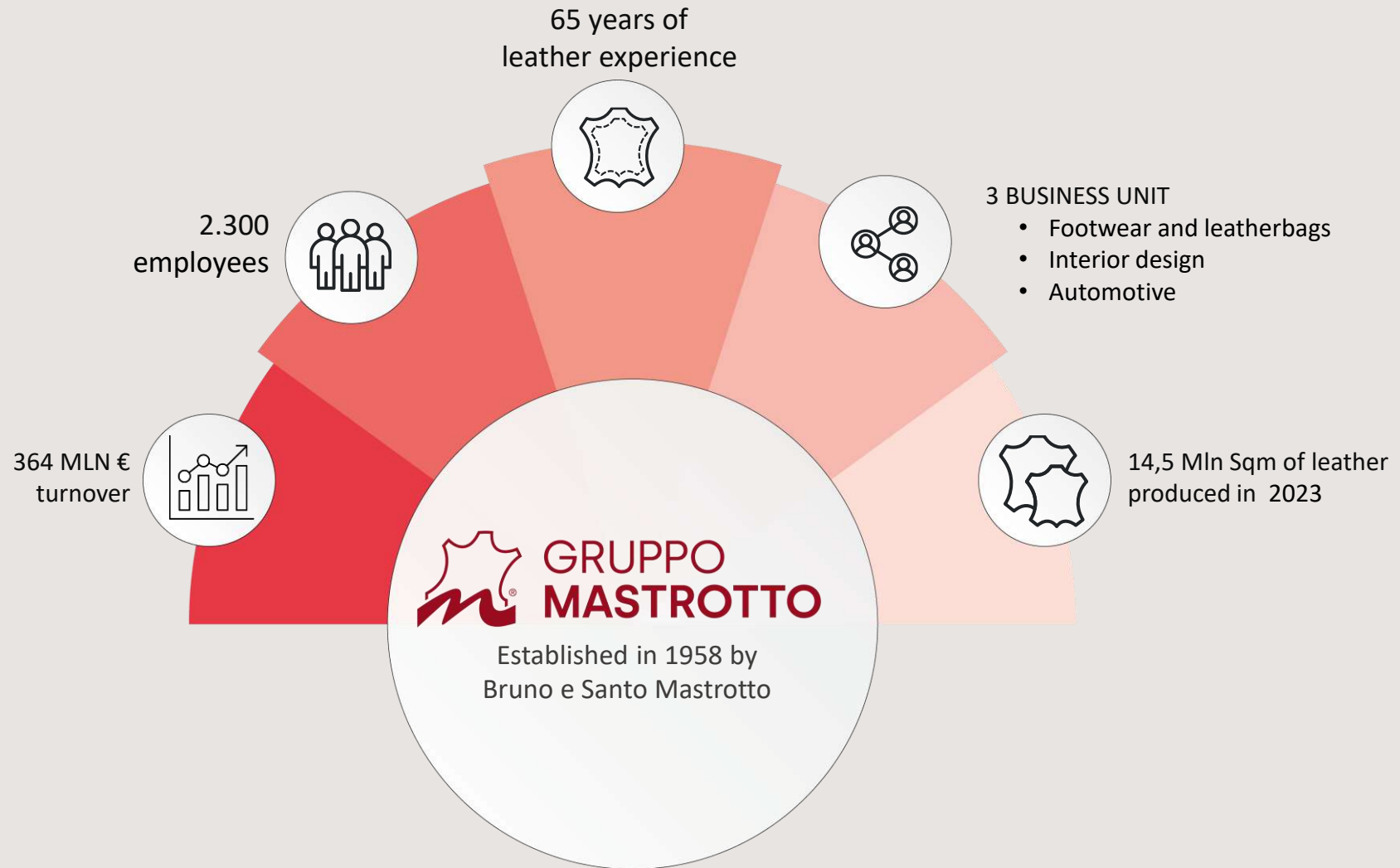
Destination use



Price range



Gruppo Mastrotto, who we are



Gruppo Mastrotto, travelling since 1958



Gruppo Mastrotto, leathers for all applications



Fashion



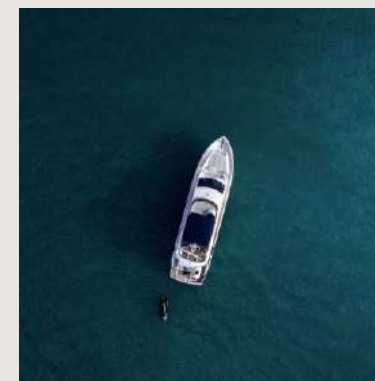
Interior and Design



Automotive



Aviation



Nautical

Gruppo Mastrotto approach to CO₂ offsetting

GRUPPOMASTROTTO

CARBON NEUTRALITY

Il progetto si è articolato in tre fasi:

Misurare le emissioni di gas serra

Abbiamo condotto un'analisi LCA (Life Cycle Assessment) che ci ha permesso di calcolare le emissioni di gas serra di un metro quadrato di pelle finito lungo tutto il suo ciclo di vita.

Abbiamo analizzato le principali fasi: agricoltura e allevamento, produzione dei prodotti chimici usati in conciaria, produzione e trasmissione dell'energia elettrica e termica impiegata, concia/tiratura/finizione della pelle, depurazione delle acque reflue, trasporti dei materiali.

Sulla base dell'analisi LCA abbiamo, quindi, stimato il potenziale impatto sul riscaldamento globale degli articoli del servizio Gruppo Mastrotto Express.

Ridurre le emissioni intervenendo sui processi

I dati ottenuti dall'analisi LCA ci hanno consentito di avviare una serie di iniziative per ridurre le emissioni di gas serra:

- utilizzo di energia elettrica proveniente esclusivamente da fonti rinnovabili certificate e dall'autoproduzione tramite pannelli solari;
- riduzione dei consumi idrici attraverso l'ottimizzazione delle ricette e il riutilizzo dell'acqua;
- minor impiego di prodotti chimici;
- efficientamento energetico dei processi produttivi.

Questi interventi hanno dato benefici ambientali rilevanti, ma non ci hanno consentito di azzerare i potenziali impatti sul riscaldamento globale.

Compensare le emissioni attraverso strumenti riconosciuti e credibili

Per compensare gli impatti residui direttamente riferibili alla produzione aziendale (scope 1) e alle energie utilizzate (scope 2), abbiamo aderito ad una serie di progetti di compensazione supportati dalla Convenzione Quadro delle Nazioni Unite sui Cambiamenti Climatici (UNFCCC), un trattato ambientale internazionale che ha l'obiettivo di ridurre le emissioni di gas serra.

La compensazione delle emissioni avviene attraverso il Carbon Development Mechanism (CDM), processo previsto dal Protocollo di Kyoto, che consente alle organizzazioni di compensare le proprie emissioni sostenendo progetti di sviluppo sostenibile realizzati in paesi in via di sviluppo.

Tale riduzione è concretamente realizzata mediante l'acquisto di CER (Certified Emission Reduction/Certificati di Riduzione delle Emissioni), ogni certificato equivale a una tonnellata di CO₂ non emessa.

I progetti delle Nazioni Unite su cui ci siamo concentrati sono localizzati principalmente in Asia e Sud America e riguardano l'introduzione di fonti di energia rinnovabili e l'economia circolare. Accanto ai benefici ambientali, questi progetti presentano anche rilevanti benefici economici, sociali, culturali e tecnologici.

In particolare, i progetti che abbiamo scelto a questo scopo sono 4, localizzati in India e in Brasile e consistono nella produzione di energia elettrica da fonti rinnovabili, sia eolica che idroelettrica, e nella cogenerazione o biometano grazie al recupero della latta, sottoprodotto della lavorazione del riccio.

Scopri di più

4 5 6

United Nations
Carbon offset platform

Log in Register

About offsetting How to offset UNF certificates Projects Contributors FAQ

Search for Project ID, country, or benefit

Search

Take climate action by supporting green projects

Calculate your CO₂ emissions

This platform features UNFCCC certified projects that reduce, avoid or restore green-house gas emissions from the atmosphere.

The projects are implemented in developing countries and are rewarded with Certified Emission Reductions (CER), a type of carbon offset measured in tonnes of CO₂ equivalent. The CERs are available for everyone to purchase to offset emissions or in support of the projects. The full contributions go directly to the projects.

View all projects

Gruppo Mastrotto approach to CO₂ offsetting

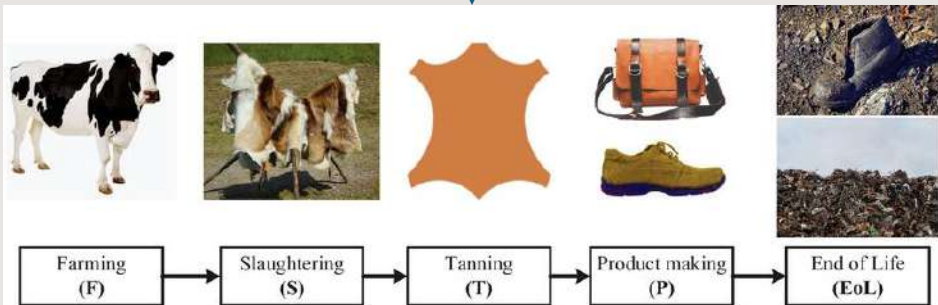


Interest in your LIFE Project



Development and implementation of a result-based funding mechanism for carbon farming in EU mixed crop livestock systems

looking beyond our gates: cooperation between farming and tanning sectors



It is a very difficult approach, which we are not used to.

It can bring two advantages:

- it allows us to address the issue of global warming in a systemic way and from a plurality of perspectives, also reducing possible conflict situations
- it allows us to try involving downstream sectors that address to end consumers and that benefit from the efforts of the upstream sectors, also asking them to share efforts and advantages

Thank you for your attention

