



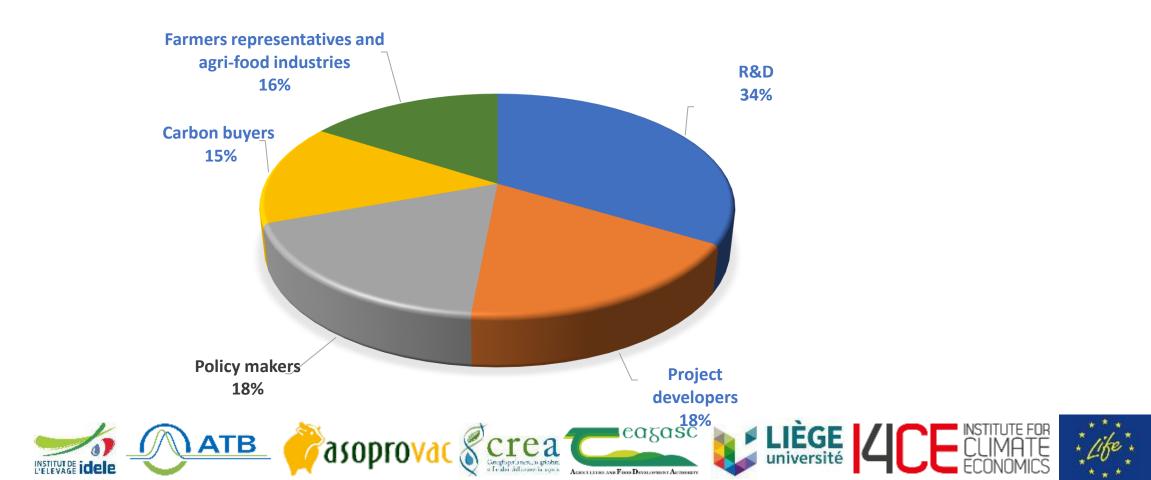
LIFE CARBON FARMING – Carbon farming certification and rewarding mechanisms in the agricultural sector

Brussels – 25/01/2023



LIFE CARBON FARMING - January 25th 2023

A large audience representative of stakeholders involved in carbon transition



Cwrbor

Farming



- Introduction Jean Baptiste Dollé, IDELE
- GHG mitigation policies in agriculture and carbon removals certification framework Valeria Forlin, DG CLIMA
- Tackling climate change in agriculture, lessons learnt from previous initiatives and needs for upscaling Jean-Baptiste Dollé, IDELE
- Presentation of the LIFE CARBON FARMING project Idele, Asoprovac, ATB, U Liège, CREA, Eilyps
- Testimonies on Carbon Farming implementation Elisabeth Pagnac-Farbiaz, French Ministry of Ecological Transition / Pierre Rayé, FCAA / Donal O'Brien, Teagasc
- Lunchbreak
- Workshop sessions
 - How to build an efficient monitoring and certification process for answering project developers, carbon buyers and public body's needs?
 - What funding mechanisms to support low carbon projects?
- Networking
- Workshop restitutions
- Questions/Answers with a panel of experts Marion Leguiel, French Ministry of Agriculture / Adeline Favrel, Clothilde Tronquet, I4CE / Donal O'Brien, Teagasc / Pierre Rayé, FCAA
- Conclusion Jean-Baptiste Dollé, IDELE



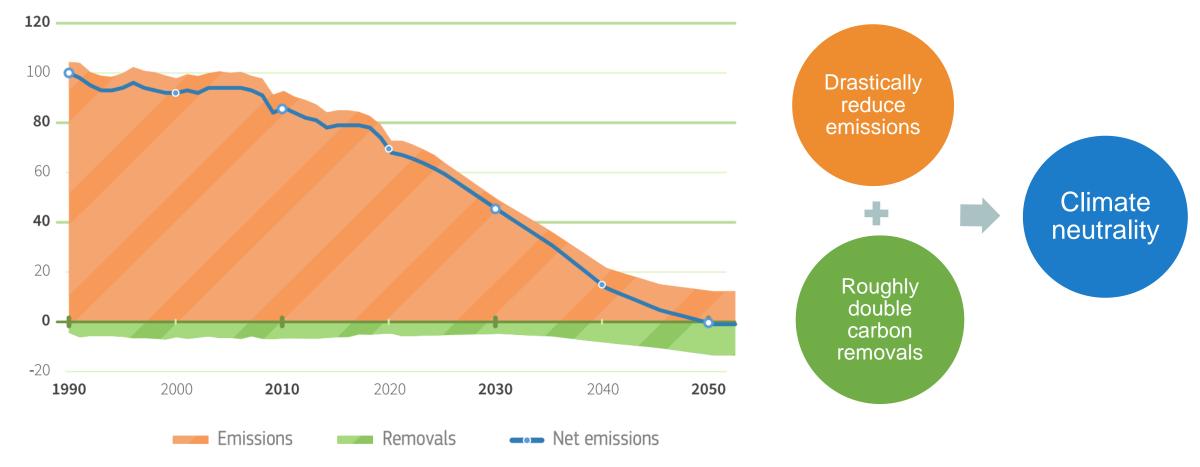






Commission proposal for a Carbon Removal Certification (CRC) Regulation Valeria FORLIN – DG CLIMA

Why carbon removals?



GHG projections for climate neutrality 1990 GHG emissions = 100 Source: EU 2030 Climate Target Plan



The policy context

Climate Law

• EU objective of **climate neutrality** by 2050

Land Use, Land Use Change and Forestry (LULUCF) Regulation

 ambitious target for net carbon removals in soils, forests and wood products: -310 Mtonnes by 2030

Communication on Sustainable Carbon Cycles

- roadmap to enable carbon removals:
 - carbon farming should contribute to 2030 target for LULUCF
 - industrial solutions should remove at least -5 Mtonnes in 2030

Different types of carbon removal activities





PERMANENT STORAGE

E.g. Bioenergy with Carbon Capture and Storage (BECCS), Direct Air Carbon Capture and Storage (DACCS)

CARBON FARMING

E.g. Af-/re-forestation, improved forest management, agroforestry, soil carbon sequestration, peatland restoration

CARBON STORAGE IN PRODUCTS

E.g. Use of wood-based materials in construction, longlasting Carbon Capture and Utilisation (CCU)



Why certify carbon removals?



Tailored certification methodologies

Fighting greenwashing & build trust

Harmonise market conditions



From objectives to the legal proposal



Legislative Proposal

Art. 1-3: General provisions

1: Scope 2: Definitions 3:Eligibility

Art. 4-8: Quality criteria

4: Quantification5: Additionality6: Long-term storage7: Sustainability

8: Certification methodologies

Art. 9-14: Certification & Certification schemes

9: Certification of compliance
10: Operation of certification bodies
11: Operation of certification schemes
12: Registries
13: Recognition by the Commission
14: Reporting

Art. 15-18: Final provisions

QU.A.L.ITY criteria for all carbon removals

QUANTIFICATION

0

Carbon removal activities are measured accurately and deliver unambiguous benefits for the climate

Additionality

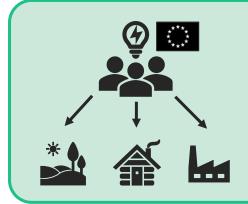
Carbon removal activities go beyond market practices and what is legally required

LONG-TERM STORAGE

Certificates clearly account for the duration of carbon storage and distinguish permanent storage from temporary storage

SUSTAINABIL

Carbon removal activities do not harm the environment or even benefit other environmental objectives such as biodiversity



To operationalise the EU quality criteria, the Commission, supported by an expert group, will develop **tailored certification methodologies** for the different types of carbon removal activities

European Commission

Requirements for certification



Carbon removal activities should be verified by independent auditors



RELIABLE CERTIFICATION SCHEMES Certification schemes should have a trustworthy governance system in place

Ξ	

PUBLIC REGISTRIES OF CARBON REMOVALS Carbon removals should be recorded in interoperable registries to avoid doublecounting



The Commission will **recognise certification schemes** that should be used by operators to demonstrate compliance with the Regulation



How does it work?

EU develops methodologies & recognises certification schemes

Operators join an EU-recognised certification scheme Q

3

Third-party verification of the activity The activity is periodically certified

4

5

Certified carbon removals are recorded in registries



How can the CRC Regulation can be used?

Public support

- Achieve climate targets, e.g.
 LULUCF, Nature Restoration Law
- Targeted support under CAP, State Aid, Innovation Fund...

Private financing

- Supply chain contracts
- Improve transparency and integrity of voluntary carbon markets
- No link with the EU ETS

Fight greenwashing

- Corporate Sustainability Reporting
- Green claims



Useful links

- Proposal: https://climate.ec.europa.eu/document/fad4a049-ff98-476f-b626-b46c6afdded3_en
- Impact Assessment: <u>https://climate.ec.europa.eu/document/ab53e63b-4b85-4d28-ac67-6bd742506bae_en</u>
- Press release: <u>Commission proposes certification of carbon removals (europa.eu)</u>
- Q&A: <u>https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_7159</u>
- Factsheet: https://ec.europa.eu/commission/presscorner/detail/en/fs_22_7161
- More information on Sustainable Carbon Cycles: <u>https://ec.europa.eu/clima/eu-action/forests-and-agriculture/sustainable-carbon-cycles_en</u>
- Delivering the European Green Deal: <u>https://ec.europa.eu/info/strategy/priorities-2019-</u> 2024/european-green-deal/delivering-european-green-deal_en





Tackling climate change in agriculture, lessons learnt from previous initiatives and needs for upscaling – Jean-Baptiste Dollé, Catherine Brocas - IDELE



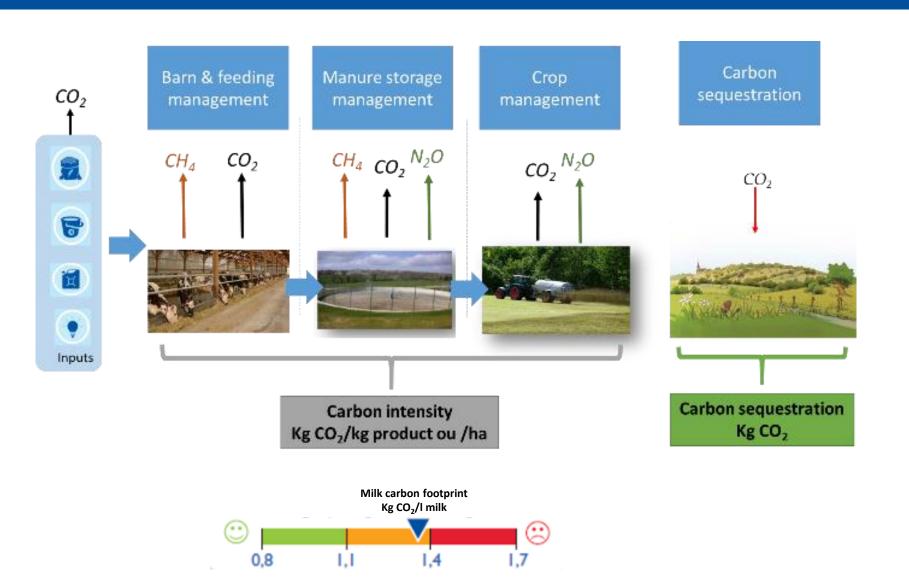
From research to practice Initiatives for disseminating low carbon practices

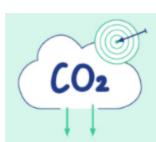


SUSTAINABLE GOAT FARMING



First, quantifying GHG emissions and carbon sequestration





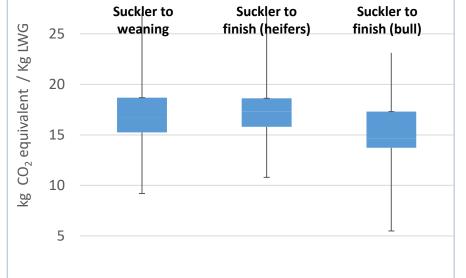
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High variability between farms







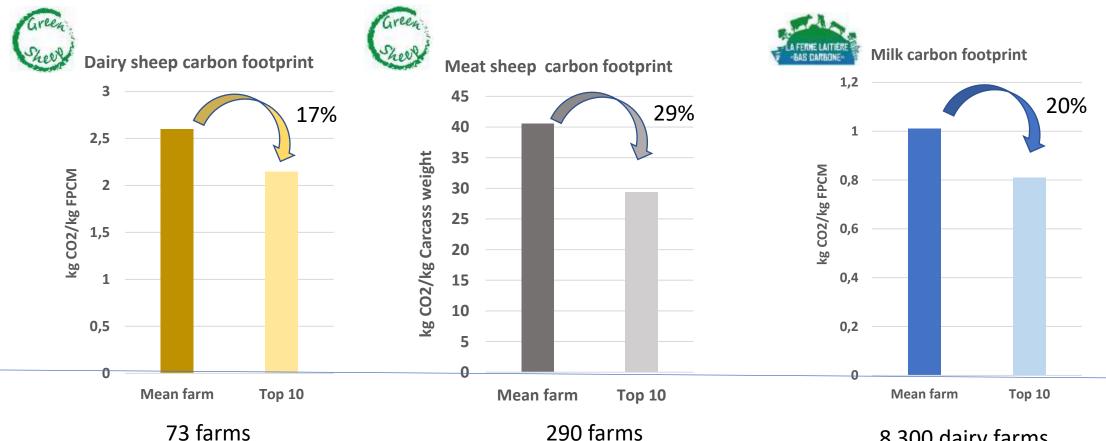






A 20% potential in reducing GHG emissions now

High difference between efficient and less efficient farms



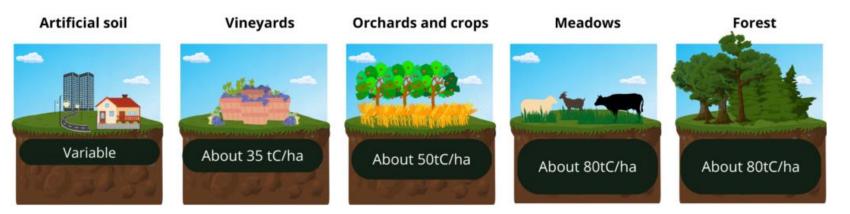
8 300 dairy farms



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CAP'2





1/ Maintaining carbon stock

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Estimation of the carbon stock in the first 30 centimeters of the soil (Source: diagram inspired by GIS Sol and ADEME, Soil organic carbon, the energy of agro-ecology, a solution for the climate)

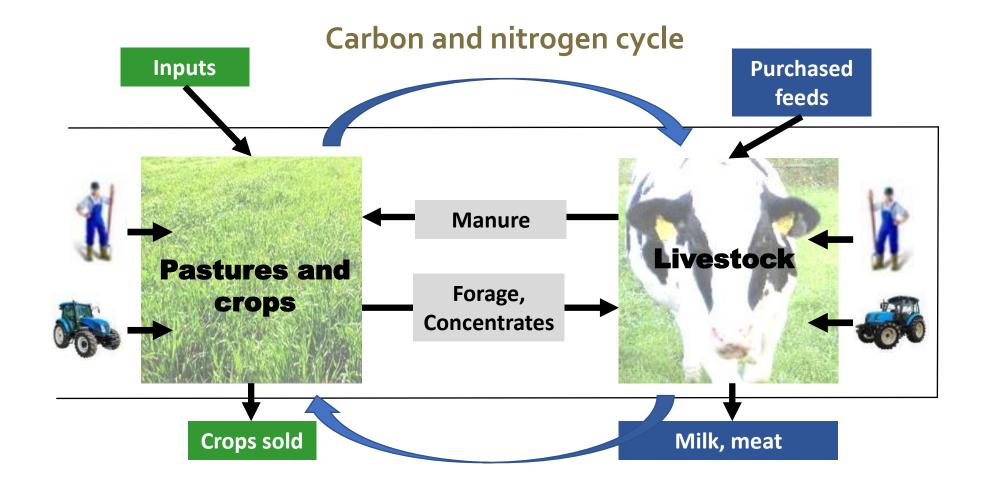


Removals target : 310 millions CO2 by 2030

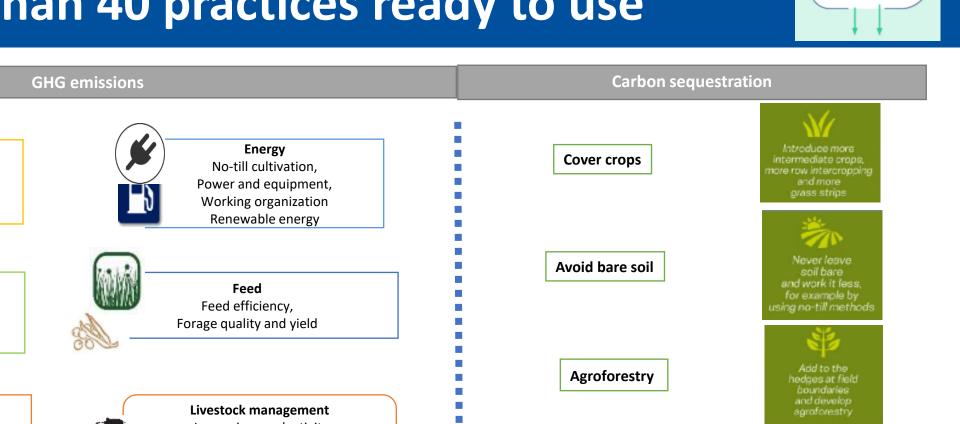
2/ Increasing carbon removals

The whole farm approach for assessing Technical&carbon performances





Mitigation, More than 40 practices ready to use



Crops management & fertilization Legume crops, Optimization of fertilizers uses Rotation Inputs Concentrates and fertilizers, Pasture management, Legumes Manure management Manure storage&application Improving productivity Fime spent in shed vs pasture, Reducing number of unproductive **Biogas production** animals, lipids **Grassland management** Optimize

The first step \rightarrow A room for improving carbon footprint up to 15% to 25%



<u>CO</u>2

Emerging solutions for tomorrow

Methane emissions

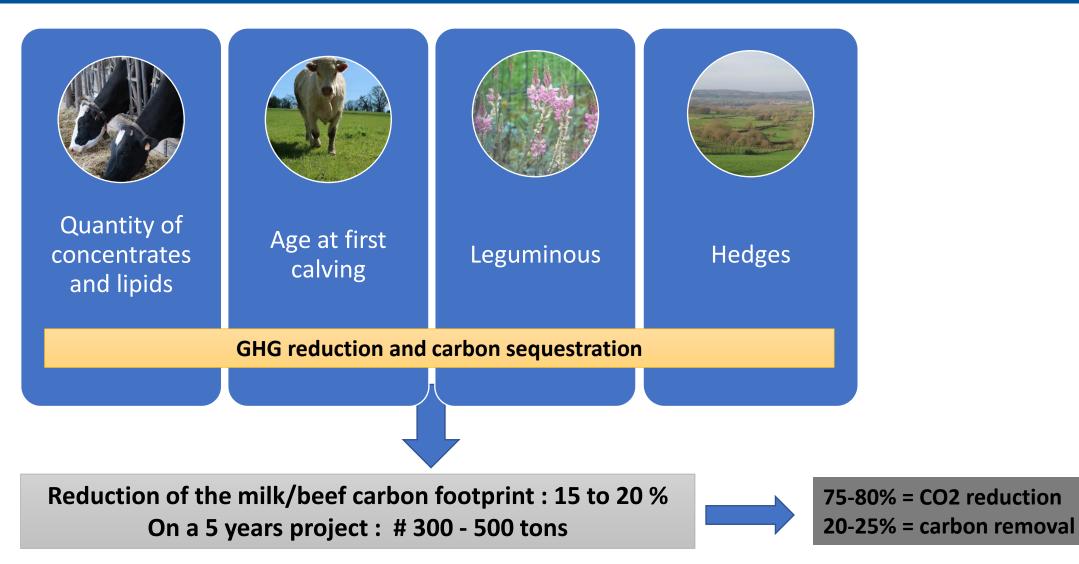
- Genetic
 - Adaptation to CC
 - Feed efficiency in livestock production
 - Methane emissions
- Feed additives
 - 3 NOP, tanins, algae, citrus
- Manure & nitrogen management
 - Additives, nitrification inhibitors
 - Protected urea
- Agroforestry



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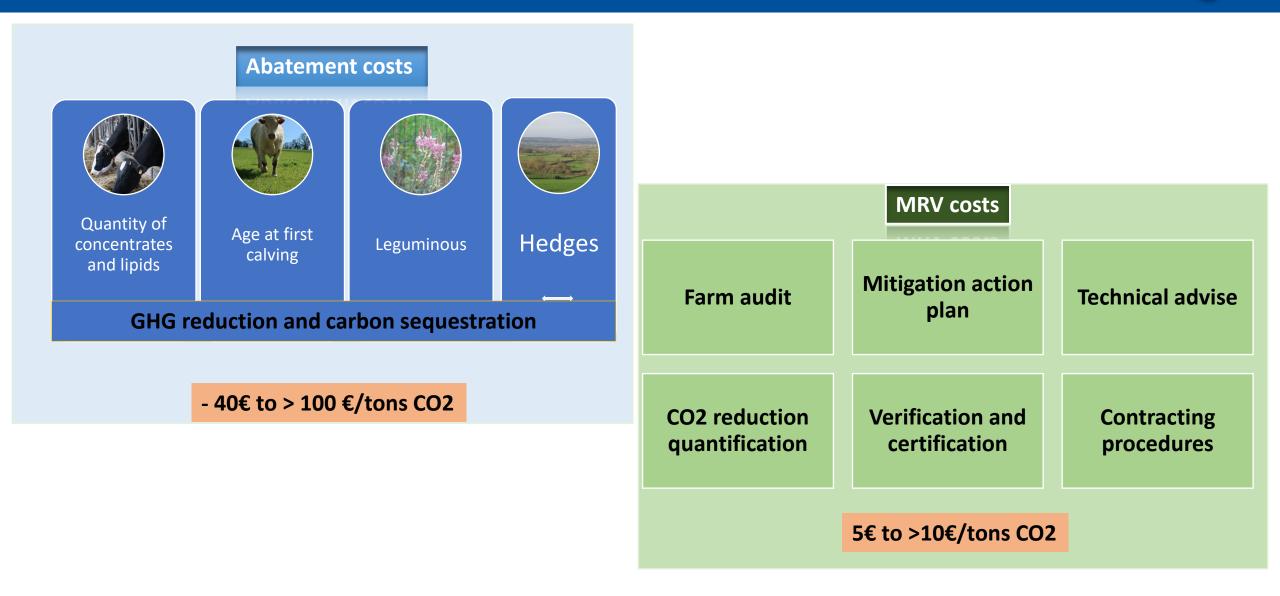
CO₂ avoided for an average cattle farm





What is the cost for farmers ?

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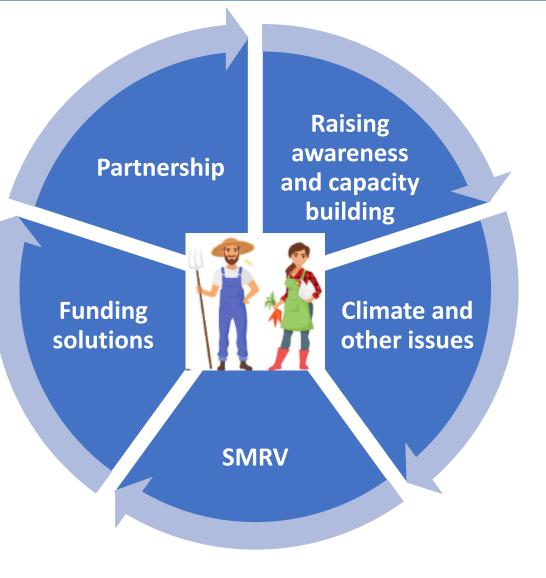


Conditions for upscaling carbon farming



Farmers oriented

Farmers must not only be part of the initiative, we have to give them ownership of this climatic transition



Raising awareness and capacity building

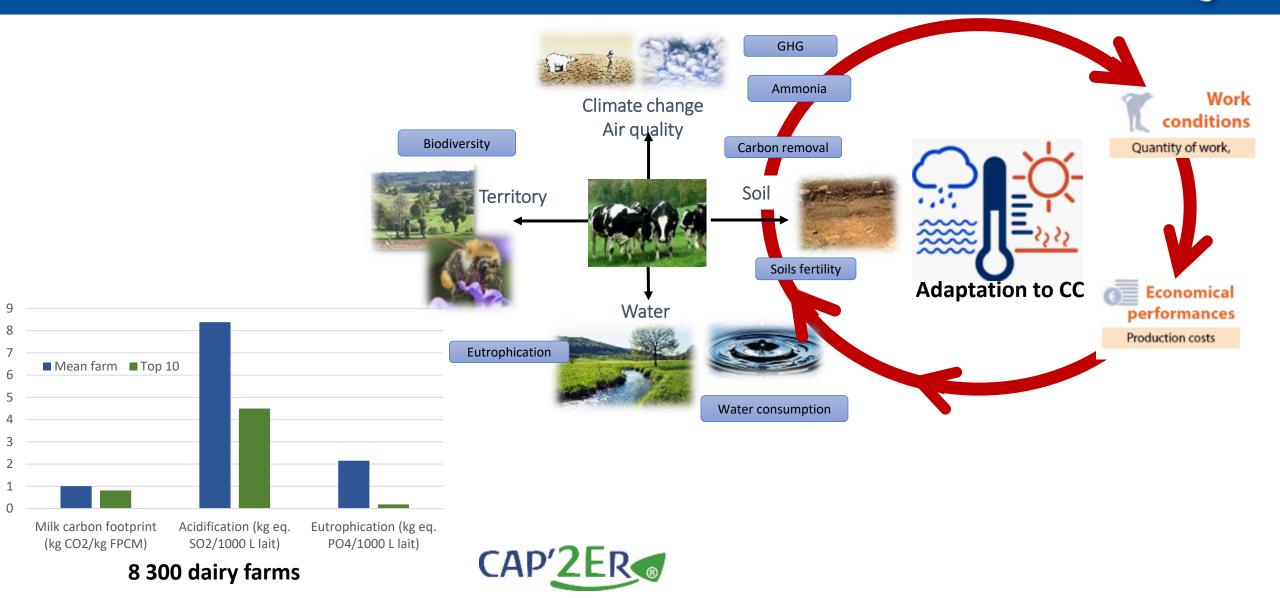
- Training sessions for farmers and advisers
- Demonstration actions, peer to peer learning
- Living labs for testing innovative solutions
- Communication tools (conferences, farm open days, press,...)





Climate and other issues i.e. considering sustainability issues

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SMRV, Supporting, Monitoring, Reporting, Verifying



Coordinating result based and practice based funding sources ?







RISK AVERSION



INVESTMENTS NEEDED



Public fundings

- Regions and countries
- EU (CAP)

Voluntary purchase of carbon credits

• Companies,

• Communities or individuals

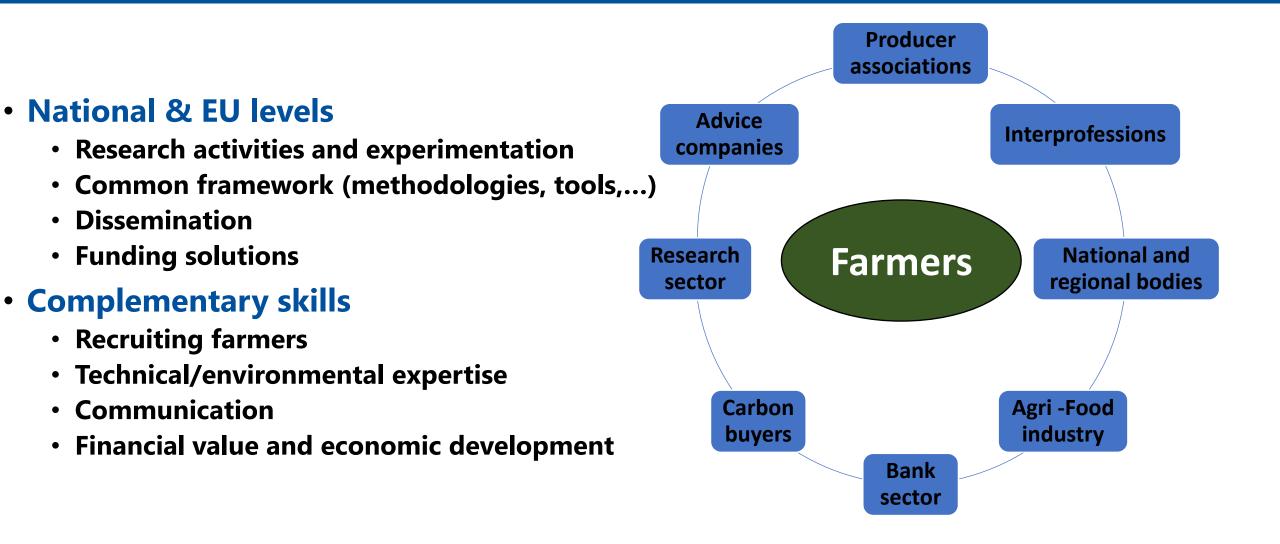
Financing from value chain

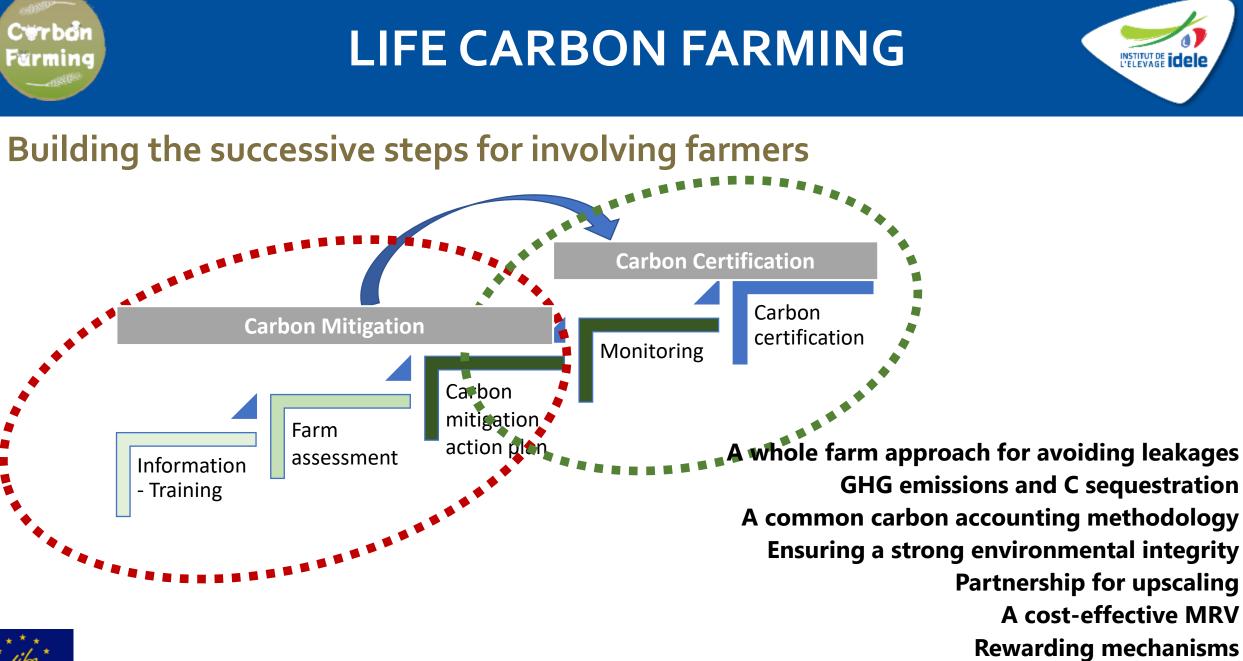
• Premium products

Voluntary contribution to low carbon projects

Other ?

The partnership is crucial to success







Presentation of the LIFE CARBON FARMING project



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Presentation of the LIFE Carbon Farming project

- Objectives and partners
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Presentation of the LIFE Carbon Farming project

- Objectives of the project:
- \rightarrow Tackling climate change by reducing by 15% the carbon footprint of 700 farms in 5 years

Farming

- \rightarrow Involving the farmers for the implementation of low carbon practices
- → Developing a result-based rewarding mechanism through a common certification framework, MRV
- \rightarrow Positive impacts on other environmental and socio-economic indicators
- \rightarrow Elaborating reference costs of low carbon projects



Partners of the LIFE Carbon Farming project

Country	Partners	
Germany		
Belgium	Université de Liège 👔 🕻 Liège	
Spain	ASOPROVAC, Factor CO2, Neiker	
France	Idele, I4CE, Eliance, Interbev, CNIEL, La CoopérationAgricole, Chambres d'Agriculture FranceImage: Complexity of the second s	15
Ireland		1
Italy	CREA, CRPA	
		Gersi

Cerbo

Farming

4.

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

Cyrbon Farming

LIFE Carbon Farming – Workshop on 25th January

→ A first project on certification in a country where there is no existing certification framework on farm's scale.

Aura Cárdenas and Barbara Amon

Acardenas@atb-Potsdam.de



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

German participation

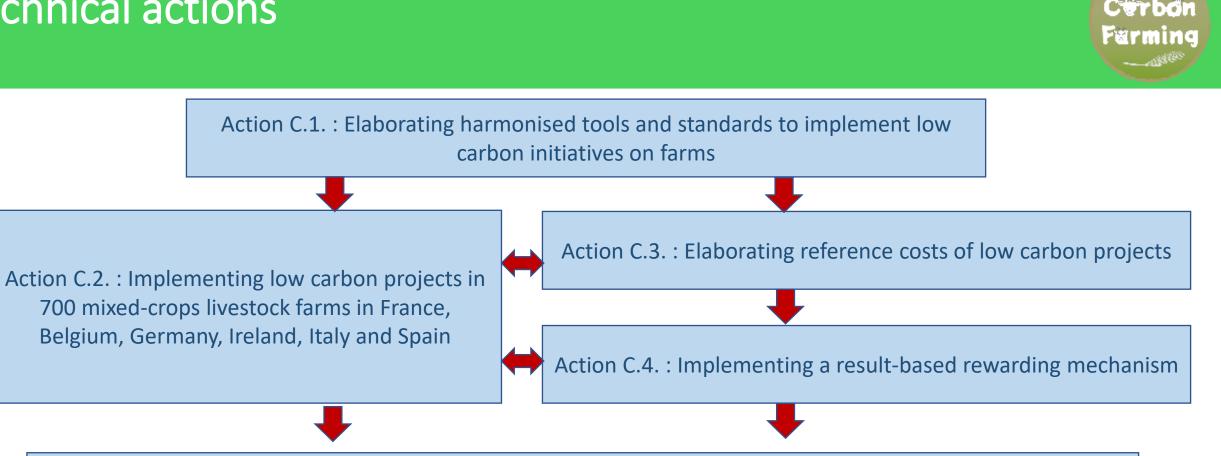
....

- 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



Technical actions



Action C.5. : Implementing a low carbon network

Action C.6. : Replication action – a common framework for a European CARBON FARMING strategy



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Methodology for an environmental and socio-economic assessment
→ State of play in year 1 : first carbon audit on farm

MRV process to follow to certify the carbon footprint reduction between 2 audits: baseline, follow-up of the reductions, verification, etc.

Methodology for an environmental and socio-economic assessment \rightarrow State of play in year 5 : second carbon audit on farm



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• Three tools used in the frame of the project



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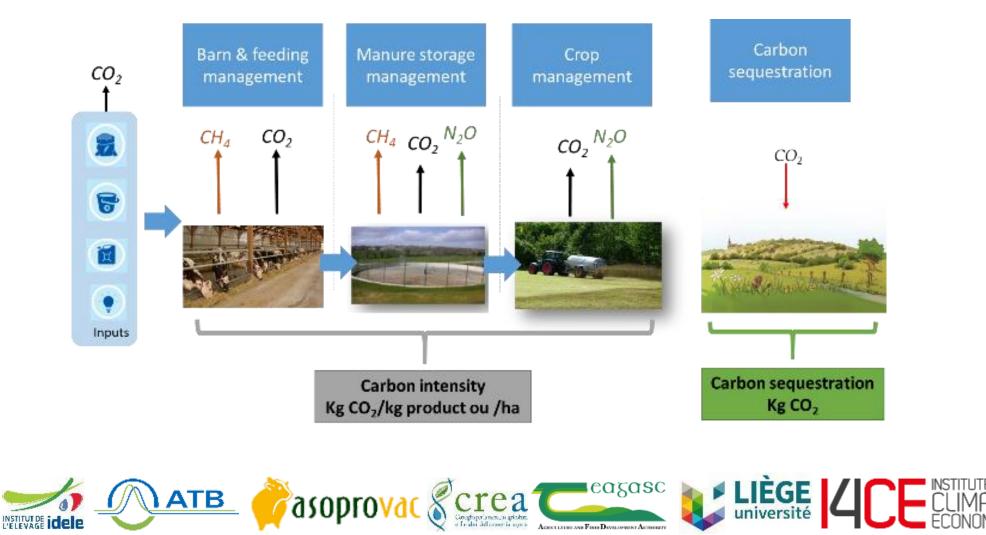




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• Overall assessments carried out on farms



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What is sustainability?

"sustainable development (SD) generally refers to achieving a balance among the environmental, economic, and social pillars of sustainability" (Murphy, 2012)

• Need to assess indicators for each of the pillars

Drivers of farmers participation to agro-environmental schemes

- Social: Age, education, successor...
- Economic: Income factors

(Lastra-Bravo et al., 2015)



easasc





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Indicators to be implemented

Environmental indicators => tools to assess environmental impacts



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Indicators to be implemented

Social indicators: figures/ multiple choice => some: already in environmental audit tools

- Working hours
- Working conditions
- Services for territory
- Farm continuity
- Balance personal/professional life

) ATB

- Products quality
- Employees on the farm
- Animal Welfare

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Ove	r-working - Do you feel overwhelmed/stressed?
	Not at all
	Only during peak times but it's occasional
	Sometimes
	Most of the time
	All the time
	r <u>king conditions</u> sical hardness - Do you worry about the physical hardness of your work
	Not at all
	Very little
	Moderately
	Preoccupied
	Very preoccupied

Working hours

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Cerbon Farming

Indicators to be implemented

Economic figures to be collected

- Income per labour unit
- Dependence on subsidies
- Debt ratio
- Exposure to price fluctuations
- Transmissibility
- Economic efficiency



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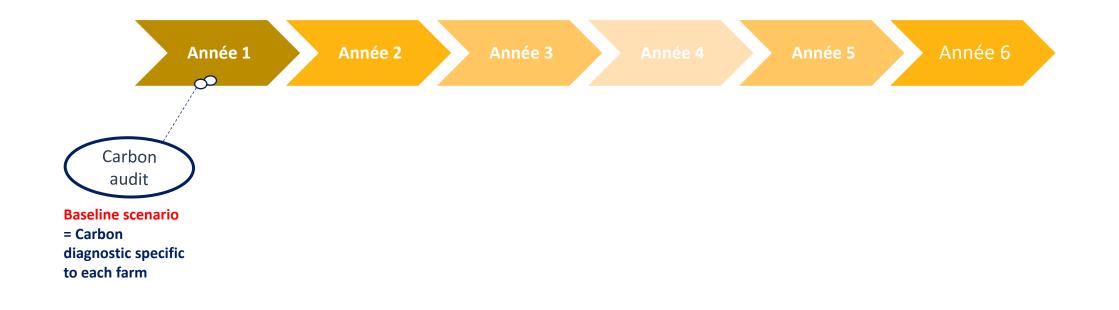
C**erbo**n Farming

- A common MRV framework to certify low carbon projects on European farms
 - → Based on the French experience of the Label Bas Carbone with the Carbon Agri method and with adaptation to national contexts.
 - ightarrow First basis of the Carbon Farming method:
 - Baseline scenario
 - Practices to be implemented
 - Monitoring of the low carbon projects
 - Calculation of the carbon gains
 - Verification

→ Carbon Farming Method will consider all alternatives to minimise MRV costs e.g. reducing data collection thanks to existing policy reporting requirements, facilitating advisers support and exchanges with farmers.

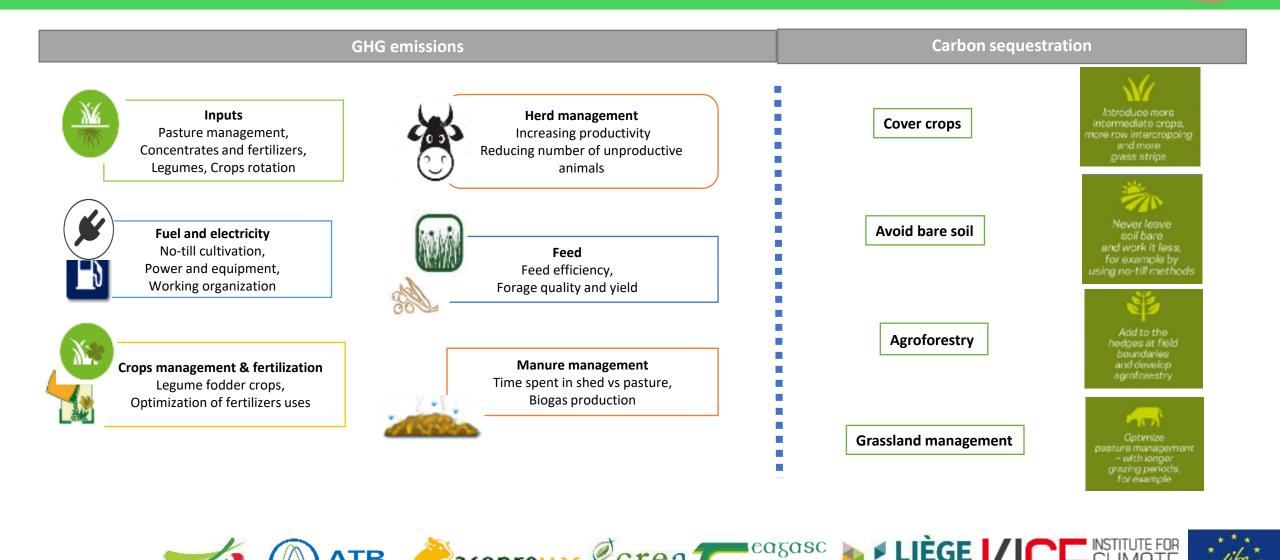


C**erbo**n Farming









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ACCENTIANCE AND FOOD DEVELOPMENT AUTHORITY

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ATB

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C**erbon** Farming

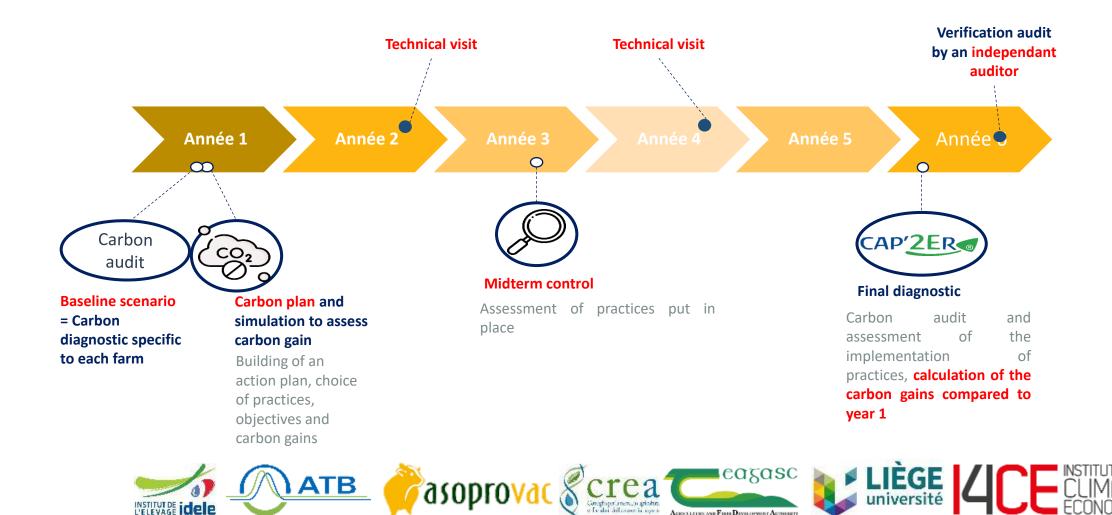


C**erbón** Farming



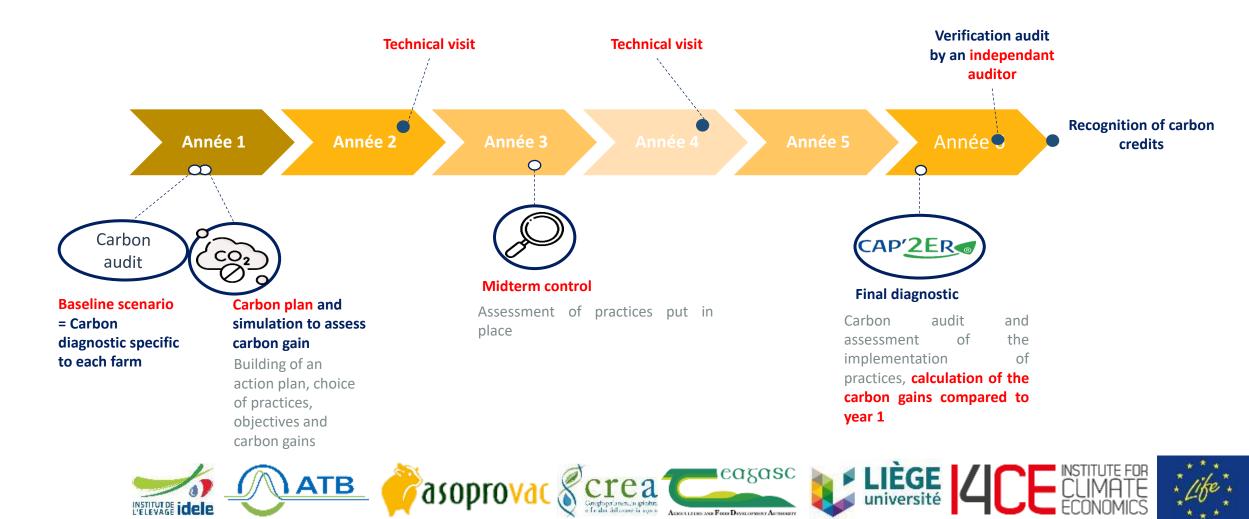
Cerban Farming

Maximum duration: 5 years, revolving project for 5 years



AGENTLY USE AND FOOD DEVELOPMENT AUTHORITY





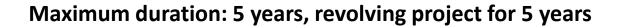
Presentation of the LIFE Carbon Farming project

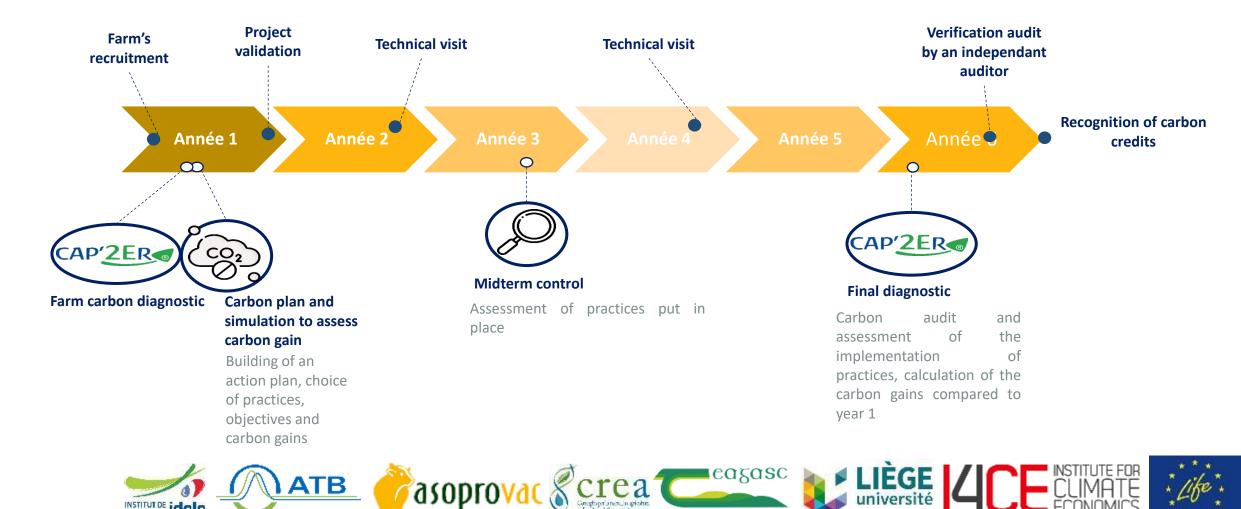
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Implementing low carbon projects in 700 mixed-crops livestock farms

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AGENTLY USE AND FOOD DEVELOPMENT AUTHORITY

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Focus on the first's years :

- Recruitment :
- Phone call
- Partnership (most of them are dairy industries)
- Other greenhouse gas reduction program
- Diagnostic :
- Sending an email to the producers with the description of the meeting and asking them to send the documents
- Going at farm and making the CAP'2ER
- Make the restitution if possible and try to start talking about the different ways of reduction
- Carbon plan and budget :
 - A balance between your knowledge and the projects of the breeders and other advisers !



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Benefits :

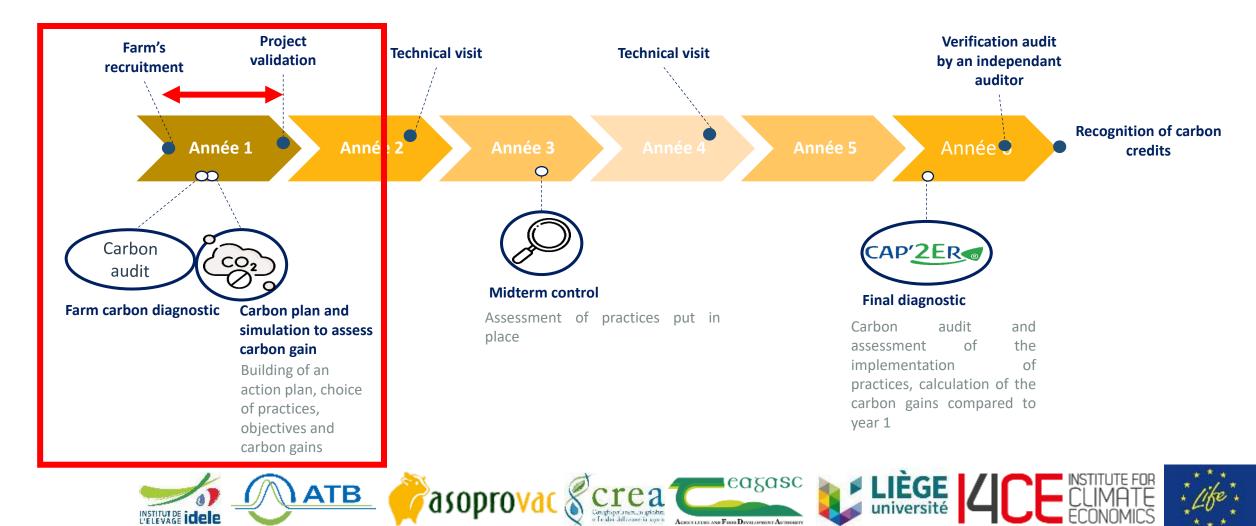


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- Technical visit :
 - Carried out by one of our specialized advisers on a theme or another organization chosen by the breeder
- Farmer benefits :
 - « Know where our farm is » -> Knowledge
 - "It's interesting to know that our projects are going in the right direction" -> Validation

Implementing low carbon projects in 700 mixed-crops livestock farms

Maximum duration: 5 years, revolving project for 5 years



Cerbon

Cwrbon Farming

Knowledge transfer as "the process through which one unit (e.g., group, department, or division) is affected by the

> experience of another Argote & Ingram (2000)

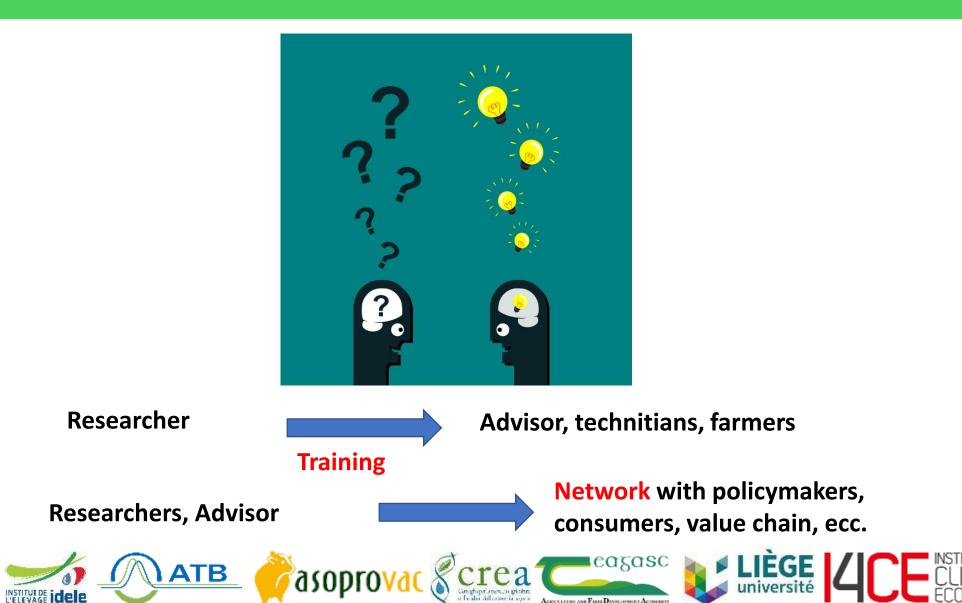


This process allows research results, discoveries, scientific findings, intellectual property (IP), technology, data and knowhow to flow between different stakeholders:

from universities and research institutions to industry or governmental institutions, generating economic value and industry development.









C**erbo**n Farming





1. Training kit which describe environmental issues in beef and dairy production, methodology to assess environmental impacts, the mitigation strategies, the gain permitted by each one, MRV mechanism......

leagasc

2. **Organization of advisers training course** with the aim to show the CARBON FARMING project, information n climate change, environmental tools, production systems, environmental impact of dairy and beef farms, mitigation techniques to reduce GHG



C**erbo**n Farming





beef farmers



easasc

Advisor+ CREA organization of training sessions (courses, workhop, farm's open day, farners network)

whole beef and dairy value chain

✤ to promote the Italian CARBON FARMING action plans and the approach to environmental sustainability (tool, MRV process, funding mechanism) developed in the LIFE CARBON FARMING project,

✤ to improve the continuous exchange of information, practical knowledge and innovative solutions for a "low carbon beef and dairy production".

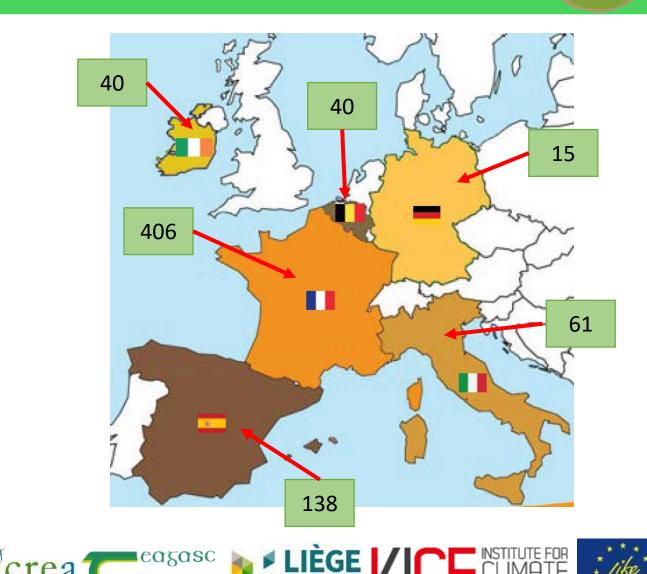


Implementing low carbon projects in 700 mixed-crops livestock farms

🕜 asoprovac

Cyrbon Farming

- Objective to involve 700 farms in the project
- → Trainings of advisors carried out or planned
- → Initial carbon audits and carbon plan on progress





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Elaborating reference costs of low carbon projects

- Objectives:
- Private administrative costs referential
- Technical costs referential
- Marginal abatement cost curves

Reduction evaluation : the volume of GHG emissions/carbon sequestration saved over the project lifetime (5 years)
The sum of private admin and technical costs will permit to elaborate

an abatement cost referential in €/t CO2 reduction



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1. This project needs recognition from the administration at several levels:

- Recognition of BAT calculation methodologies;
- Avoidance of double counting for the same practices;
- Possible inclusion of improvements in inventories
- Avoid greenwashing
- **2.** Developing incentives to reduce the carbon impact of the land sector
- 3. Without the recognition of the administration, it will be impossible for small and medium sized farmers to engage in improving their practices beyond what is legally required.



Do not limit the European carbon certification framework to carbon removals

C**erbo**n Farming

- Carbon sinks, but also GHG sources as prescribed in IPCC guidelines
- Payments on results are a solution to ensure the environmental impact of funding
- Include indirect emissions in the scheme
- It is essential to consider N2O and CH4 emissions:
 - Certify only those projects that have no negative impact on N2O and CH4 emissions or;
 - Certify net sequestration (carbon sequestration minus any increase in N2O and CH4 emissions)
- Deal with carbon sinks, emission reductions and indirect emissions within the same framework BUT to count them separately
- Deal to several certifications could discourage from focusing on both carbon sequestration and emissions reductions"



- The labelled practices they must not lead to negative effects on other environmental issues
- To back up the calculation of the carbon impact with indicators for monitoring other issues.
- This integration should be discussed with stakeholders and the scientific community to validate together the choices and keep in mind European objectives.



Curbon Farming

- Methodologies used should combine the accounting or modeling part and MRV rules.
- If all projects do not have the same MRV rules with the same robustness and transparency, there would be a risk of competitive distortion

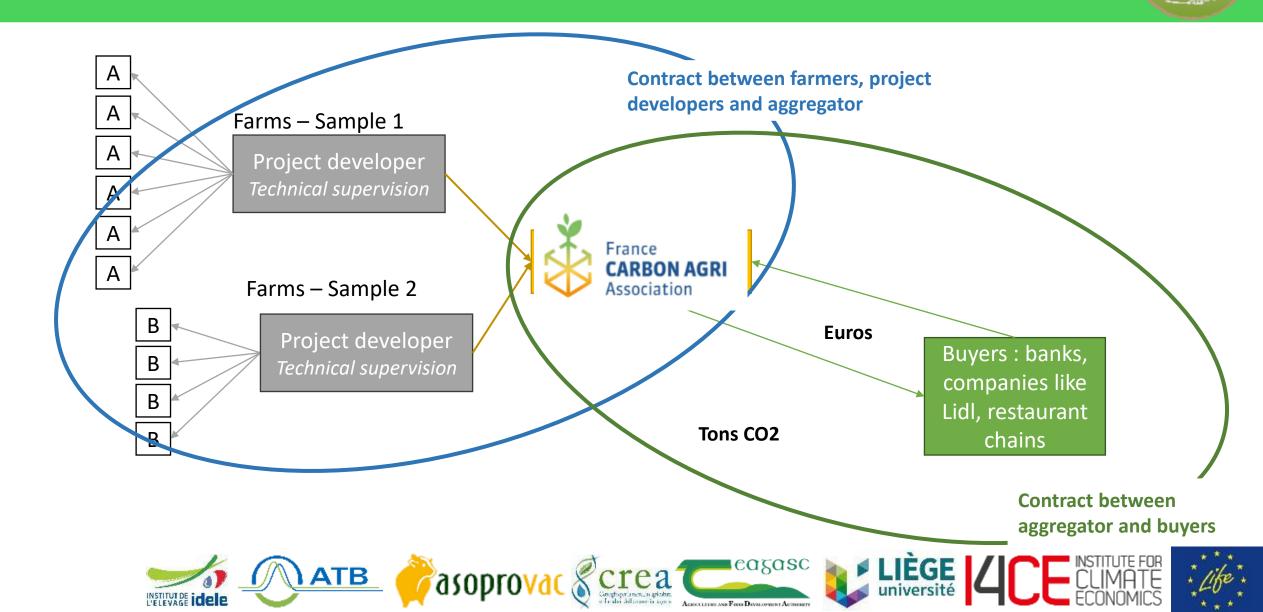
1) The CE defines a list of credible and robust existing standards.

2) The CE defines common MRV rules but allows for multiple methods or standards.

3) The CE defines a common and single carbon standard with its own specific methodologies, using common accounting rules and scientific models.



Implementing a result-based rewarding mechanism



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FCAA = aggregator for the 700 farms of the project :

- Certification of the 700 farms with the method built in action C.1.
- ightarrow Studying all the possible sources of funding and the carbon market
- → Survey built to solicit buyers and better understand their needs and if they would be interested in funding low carbon projects in the frame of the LIFE Carbon Farming
- ightarrow Finding fundings and adding value to certified carbon gains



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Implementing a low carbon network

→ Promoting exchanges and knowledge sharing on low carbon initiatives on national and European scales to have a dynamic between the project participants

Farming



Objectives :

- 6 Three-day European workshops with visits on farms
- 11 two-day national workshops with visits on farms

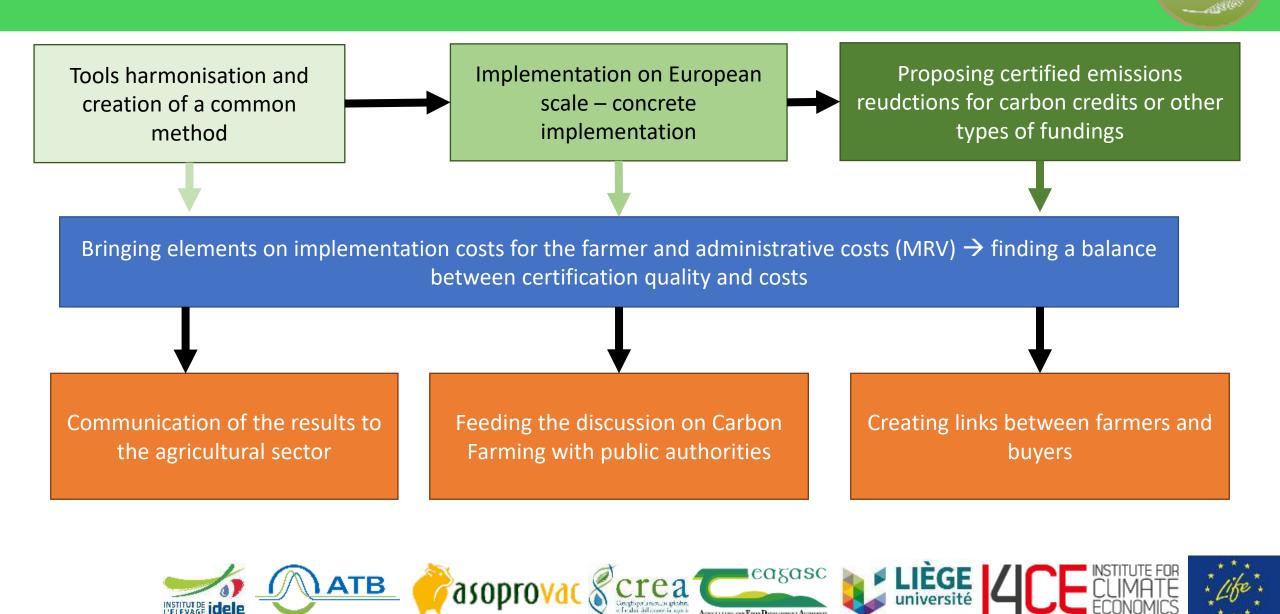


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- Inputs of the project for the Carbon Farming



Inputs of the project for the Carbon Farming

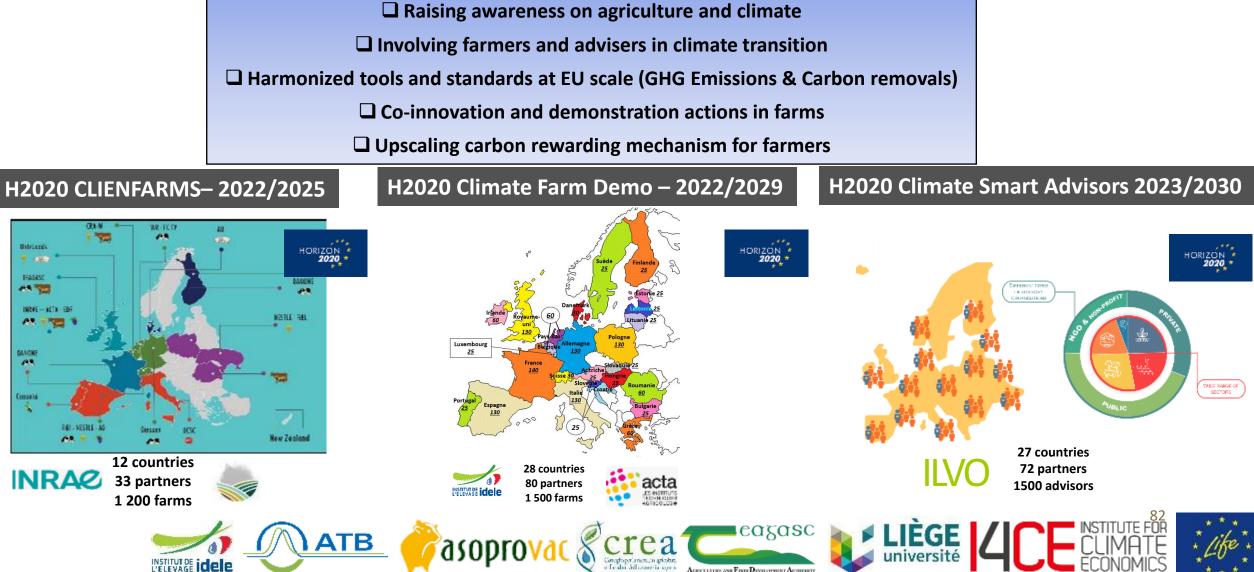


Ctrbo

Farming

LIFE CARBON FARMING interconnected with other EU projects





> Testimonies on Carbon Farming implementation



- Mir Mino

LABEL BAS CARB

Rewarding actors fighting climate change at the local level

MINISTÈRE DE LA TRANSITION ÉNERGÉTIQUE Liberté Égatité Fratemité

French Ministry of Energy transition

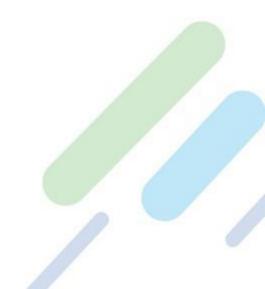
LABEL BAS CARB



Agenda

I. Context
II. Functioning of the Label
III. Methods
IV. Projects
V. Financing

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- The label was developed in **2019**.
- Current climate change mitigation actions are insufficient to achieve the 1.5-degree target.
 - Need to support emission reduction and carbon sequestration efforts, especially in diffuse sectors (agriculture, forestry, transport, building, recycling/reuse...)
 - Contribution to the implementation of the **National Low-Carbon Strategy** by :
 - Promoting the emergence of **local actions** that benefit the climate and the dissemination of good practices
 - Mobilizing **innovative financing** for climate action from various stakeholders • (companies, public bodies, citizens...)
- DE LA TRANSITION ÉNERGÉTIQUE

Stratégie nationale

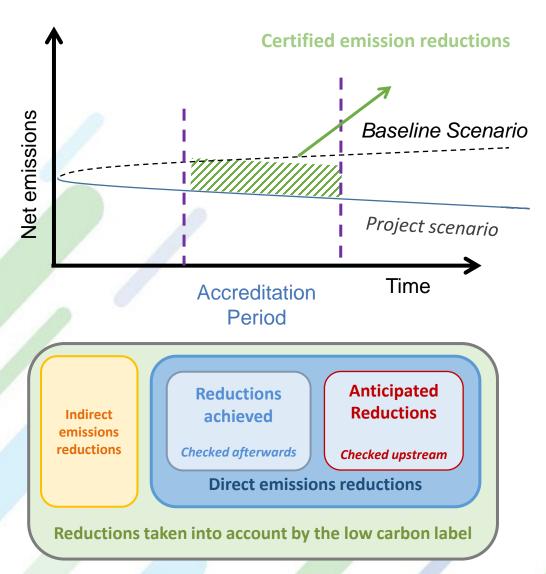
bas-carbone

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Frateri

- Certification tool that guarantees environmental quality
 - Additional emission reductions and carbon removals •
 - **Co-benefits** (biodiversity, social...) neutral or positive

LABEL BAS CARBINE II. Functioning of the label

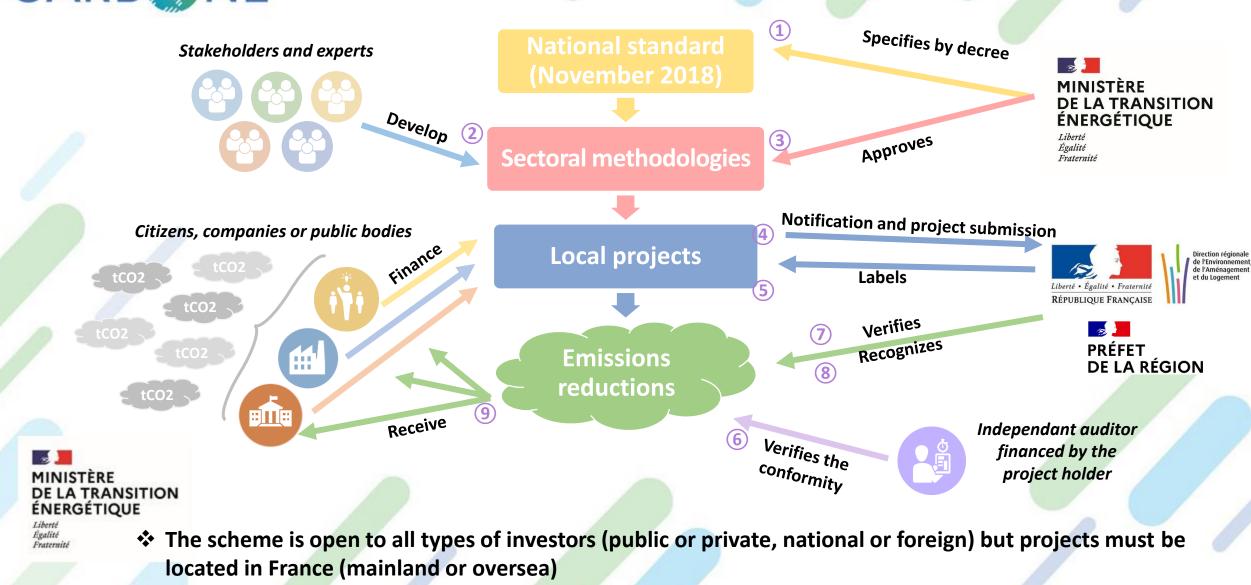


- What is called "réductions d'émissions" in the LBC = emissions reductions and CO2 absorptions, indistinctively
- Emission reduction are **monitored accurately** (discounts may apply) and **verified by an independent and qualified auditor,** according to modalities specified in the method.
- Additionality is assessed relative to a baseline scenario, determined in the method :
 - ✓ Likely situation in the absence of labelling
 - Regulatory requirements and common practice
 - ✓ Incentives provided by other instruments than the label

 \rightarrow Only emission reductions that go beyond the baseline scenario are recognized

→ To ensure real additionality, a specific baseline scenario should be used whenever possible: generic baseline scenarios are only possible in duly justified cases, discounts are applied to avoid over-estimations

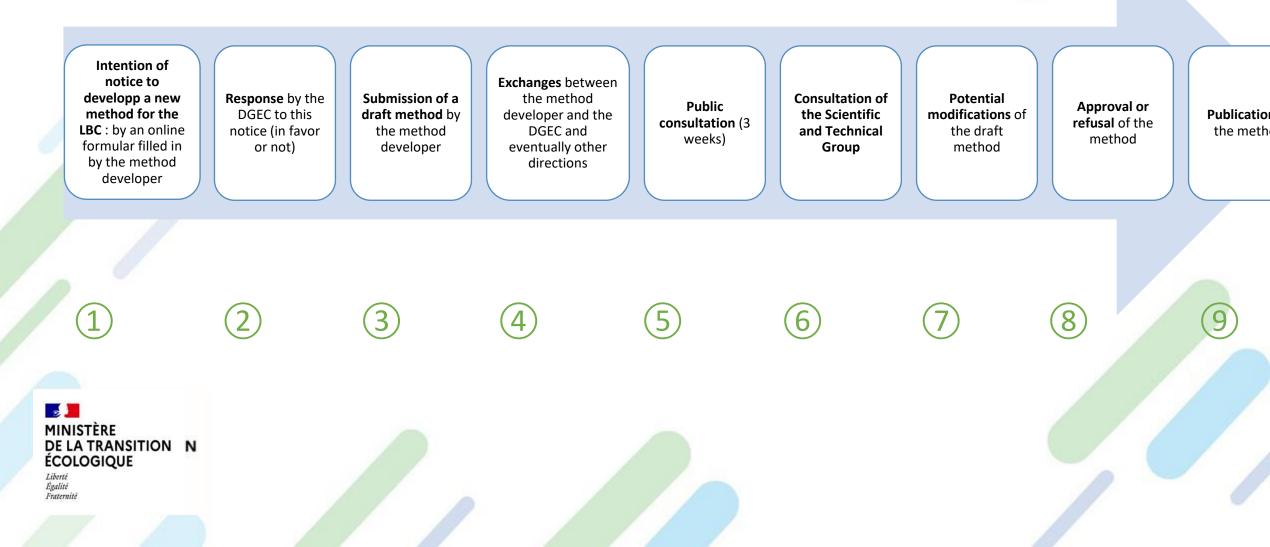
LABEL BAS CARBONE II. Functioning of the label



LABEL BAS

III. Methodologies

How to approve a new method ?



LABEL BAS CARB

2

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DE LA TRANSITION ÉCOLOGIQUE

III. Methodologies

Composition of the scientific and technical group

Scientific and Technical Group



LABEL BAS CARB

III. Methodologies

Each methodology

- 1) Specifies **eligibility criteria** of the projects
- 2) Specifies how additionality is demonstrated
- 3) Evaluates the **cobenefits** (negative and postive impacts)
- 4) Takes into account the **risk of non-permanence** and of release of carbon, by applying **discounts**
- 5) Determines the procedures to **verify the emissions reductions**
- 6) Specifies the procedures to **monitor the indicators**

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III. Methodologies

11 methodologies have been approved

.



- Forest :Afforestation
 - Reforestation after fire, storm or sanitary disease
- Saplings selection



Agriculture :

- Orchards plantation
- Sustainable management of hedges
- CarbonAgri (livestock-crop farming)
- SOBAC (input management)
- Ecomethane (cattle feeding)
 - Field crops

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Transport : - use of local co-working spaces

Building sector :

- Reuse of building materials in rehabilitation operations

LABEL BAS CARB

III. Methodologies

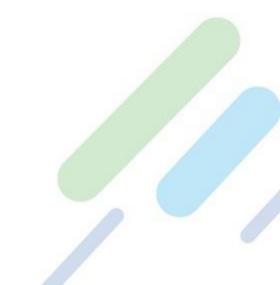
Methods under development

Methods under development

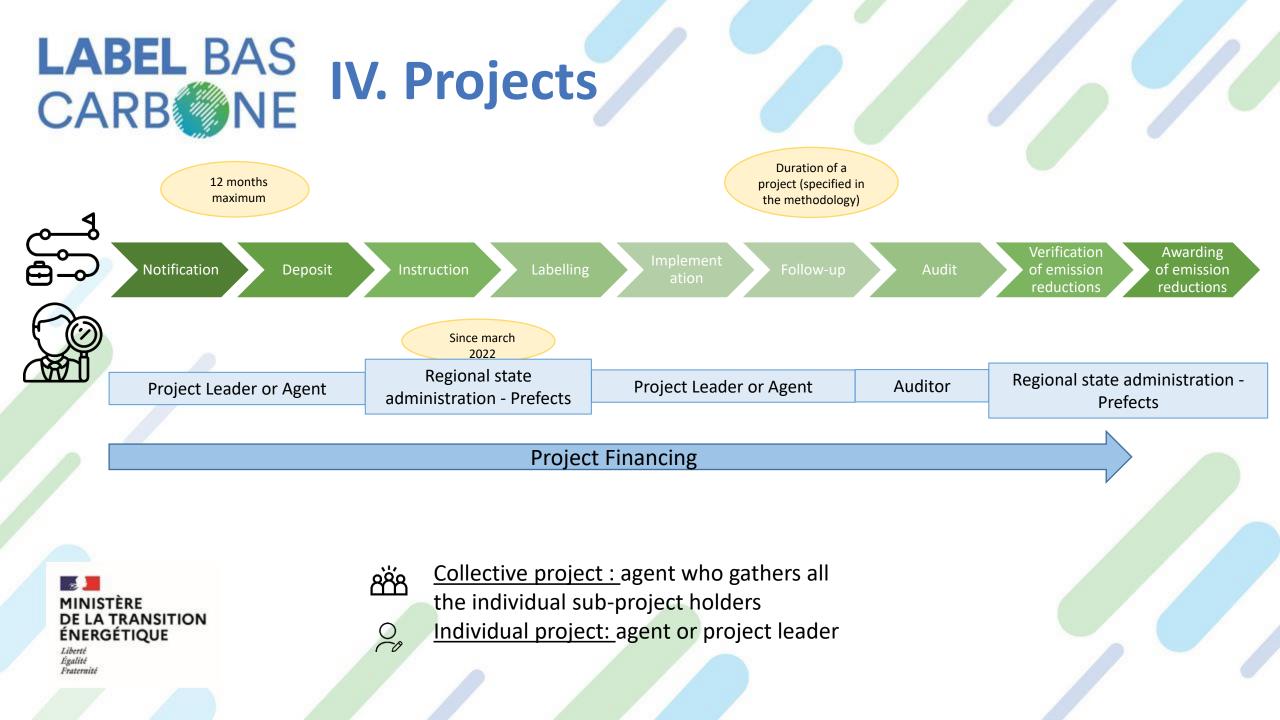
- Agriculture: pig farming, agroforestry, winegrowing ...
- Forests: forestry with continuous cover ...
- **Circular economy**: recycling and reconditioning of electronic devices..
- Wetlands: improved protection of mangroves, of seagrass...
- **Building**: use of bio-based materials in new buildings...
- Transport: freight transport...



(G)

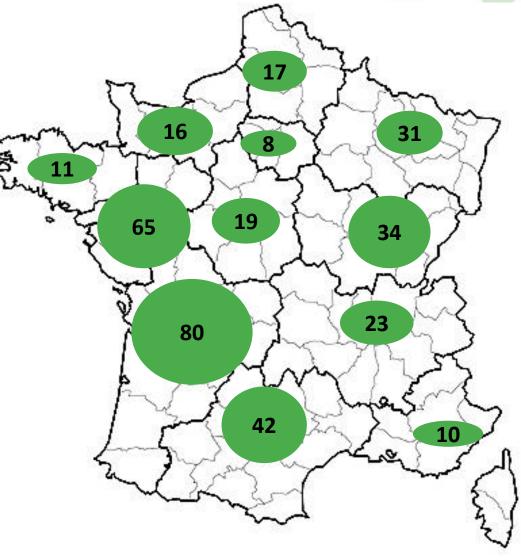


LABEL BAS III. Methodologies CARB Link between methods : overlapping levers CarbonAgri (livestock-crop farming) Permanent pasture **Field Crops** Hedges Cattle buildings SOBAC Temporary pasture (input management) Sustainable planting and Sustainable planting and Mineral and organic management of hedges management of hedges fertilizers production (any hedges owner) (Breeders) **Reducing fertilizers** Other crops Storage buildings use (both organic (winegrowing, and mineral) horticulture, ...) Other cattle leverage Power consumption **Ecomethane** points Reducing the use of Fabrication process of (cattle feeding) crop protection crop protection products Pasture products Other crops : Fodder from forage grass in the Alfalfa and ALA rich seeds Others leverage points feed ration Orchards (flaxseeds, camelina seeds) in about field crops Increase in fodder quality the cattle feed ration MINISTÈRE DE LA TRANSITION Other feeding leverage Carbon storage in ÉNERGÉTIQUE points threes and soils Liberté Égalité Orchards Fraternite plantation



LABEL BAS CARBINE IV. Projects : 357 labelled projects

357 labelled projects for around 1,4 M t_{eq}CO₂



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Égalité Fraternité

LABEL BAS CARE NE IV. Financing : a growing number of funders Private :

The funder can contact the project developer at any moment :

- At the start of the project development;
- Once the project is labeled and displayed on the website;
- Once the emissions reductions are verified.

Only **direct financing** : once the emission reductions are bought, they can not be transferred any more, **but** :

- Some project developers may mandate a representative ("mandataire") to take in charge the entire labelling process, including looking for funders.
- A single intermediary can connect or aggregate funds from several individuals or legal entities who wish to participate in financing the project

DE LA TRANSITION ÉNERGÉTIQUE

Liberté Égalité Fraternité « Emission reductions », once attributed to one funder, cannot be sold or exchanged in any way.



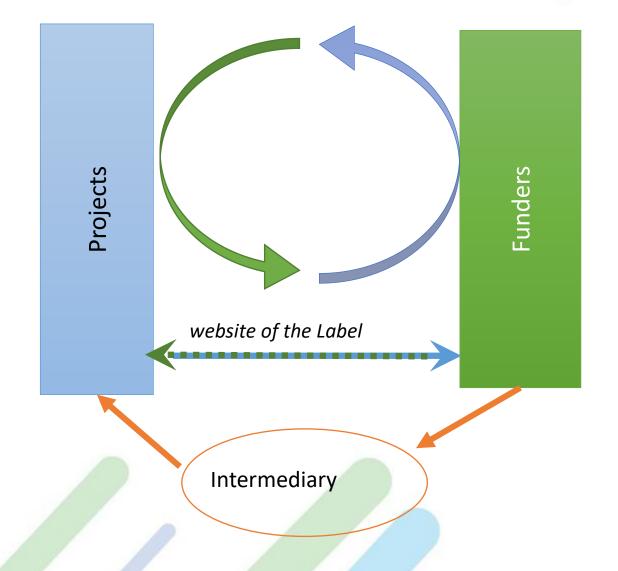
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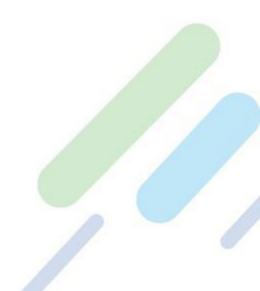
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LABEL BAS CARBINE V. Financing : Connect projects and funders





MINISTÈRE DE LA TRANSITION ÉNERGÉTIQUE Liberté Exalité

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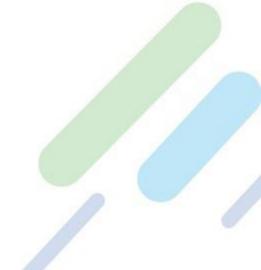


Thank you !

MINISTÈRE DE LA TRANSITION ÉNERGÉTIQUE

+ https://label-bas-carbone.ecologie.gouv.fr/







How to Involve Famers in Extension Projects: Setup and Recruitment

Donal O'Brien¹ and Martina Harrington²

Teagasc, Soils and Environment Research Centre, Johnstown Castle, Co. Wexford, Ireland Teagasc, Advisory Office, Enniscorthy, Co. Wexford, Ireland



Carbon Farming Certification Workshop, Fondation Universitaire, Brussels, 25th January 2023



Background

- Teagasc Irish Agriculture and Food Development Authority
 - National body, est. 1988
 - Integrated advisory, education and research service
 - Employ 1,200-1,300 staff
 - State and industry funded
 - » (70%-75% exchequer)
- Strategy Statement
 - Improve competitiveness
 - Support sustainable farming
 - Enhance diversification







What does Teagasc Extension Programme offer farmers?





Signpost Programme

Teagasc initiative to reduce carbon/greenhouse gas (GHG) emissions from Irish agriculture

Supported by ministry and industry (co-ops, food processors)

Establish baseline GHG fluxes and carbon stocks

Accelerate uptake of climate actions across farming enterprises - Beef, Dairy, Sheep and Tillage

Biodivers

Quantify and verify carbon/GHG savings

Signpost Advisory Campaign

- Signpost Farmers central to Signpost Advisory Campaign
- Primary focus for our advisers and teachers
- Tailored advice Farm Sustainability Plan
- Blended approach traditional and digital
 - Living labs Measure and model C sequestration

FRICULTURE AND \mathbf{F} OOD \mathbf{D} EVELOPMENT AUTHORITY

Targeted communications



Signpost Programme - Future Beef Farms

- Building on BETTER farm & LIFE BEEF CARBON initiative
 - Improve efficiency while enhancing environmental performance
- Cohort of Demonstration farms
 - P2P learning central to success
- Represent key characteristic of suckler beef farms in a region:
 - Farm size and soil types
 - Beef Breeds
 - Production systems e.g., suckler calf to weanling, weanling to beef, fattening









Future Beef – Recruitment Process

- Extensive selection process
- Zoom meeting will all 12 regions Regional managers, cattle advisors & education staff.
- Explained:
 - Future Beef & Carbon Projects
 - The farmer profile required
 - What the farmer could expect
 - What we would provide the farmer with
- Application form designed and emailed to all cattle advisors & industry funders







Future Beef – Recruitment Process

- Large number of applications
- Shortlisted within region
- Remote meeting with applicants
- 36 farms visited
- 22 farms selected
- From beginning building an awareness of the programme

Name	Shane Keaveney
Address	Ballybane, Ballinlough, Co. Roscommon
Eircode	F45PC04
Phone Number	0876993200
Email address	keaveneyshane@yahoo.ie
Herd Number	T2011933
Feagasc Advisor	Charlie Devaney
am farming 27.61Ha t is in 3 sections that here is a mixture of	area of land, soil type, fragmentation etc. , are all within a 1.5 mile radius. clay soils and peaty soils. the North/West Roscommon region.
am farming 27.61Ha t is in 3 sections that here is a mixture of	I. are all within a 1.5 mile radius. clay soils and peaty soils.
am farming 27.61H t is in 3 sections that there is a mixture of t is typical of farms in System of fac	are all within a 1.5 mile radius. clay soils and peaty soils. the North/West Roscommon region. Traing m of farming including Cow numbers, spring or autumn calving, heifers/





Reasons Farmers Join Sustainability Projects

- Want to future proof their family farm
 - Improve resilience and long-term viability of their business
- Understand the need for change Require direction & support
- Produce more from less, become more competitive...win: win
- Decrease dependence on fossil fuels, chemicals, plastic etc...
- Integrate science based solutions into their farming practices
- Work in partnership with peers and extension team
 - Innovate , Share the possible...to shape positive change



10 8



THANK YOU FOR YOUR ATTENTION

QUESTIONS?



109 Teagasc Presentation Footer





Implementing and funding collective result-based Low Carbon Farming projects

LIFE CARBON FARMING workshop

25th of January 2023

Pierre RAYE – France Carbon Agri





FCAA : a pioneer initiative launched in 2019 by French farmers

FCAA : created by famers organisation



Mission : «Supporting agroecological transition via the funding of farming practices reducing the carbon footprint of agriculture. »

Key values :

- Implementing the **best scientific standards** to guarantee the impact of the projects.
- Securing the traceability of carbon credits.
- Ensuring the transparency of the value chain.
- Maximising the **financial return** to **farmers.**





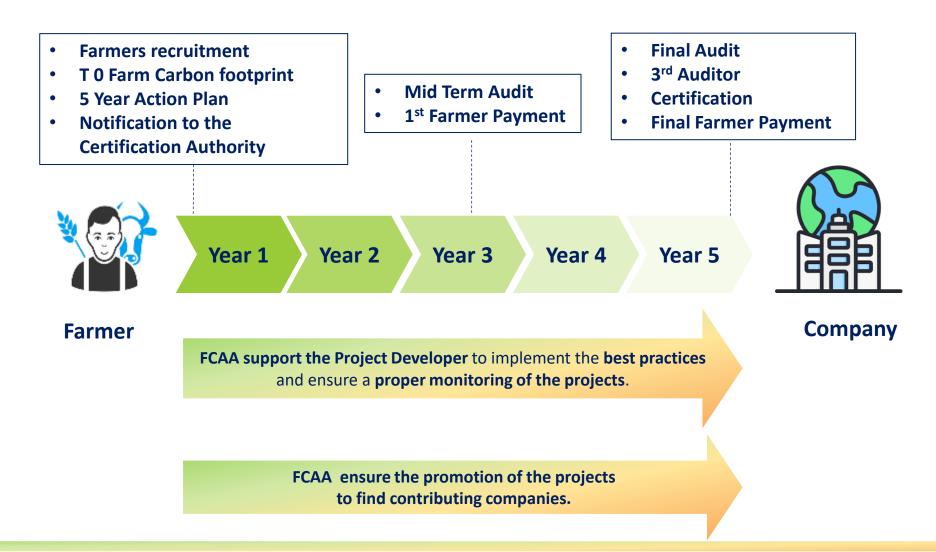
FCAA : a platform to make the carbon farming project possible





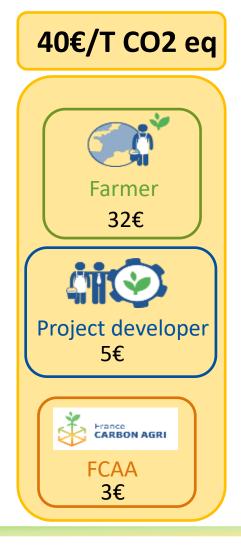


Supporting & Securing the certification of Carbon Farming projects





FCAA : a trusted third party between farmers and contributing companies



FCAA-Farmer - Project developer -

- Each party remuneration
- Farmer commitment to implement the action plan.
- Project developer
 commitment to assist
 technically the farmer.
- FCAA commitment to monitor the certification and funding of the project.

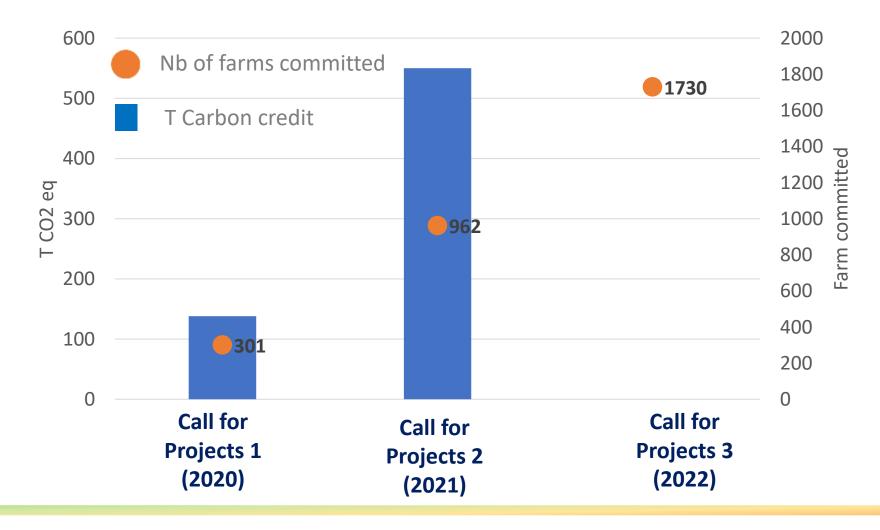
- FCAA
 Contributing company -
- Carbon credit volume & price.
- Carbon farming specifications :
 - Localisation
 - Cobenefits
 - Others...

• • •

- FCAA commitment to ensure the implementation of the project.
- "Taylor Made" services : communication, engineering



More than 3 000 farmers committed with FCAA





Example of the 1st call for projects



12/09/2023

Number of levers per theme for the 300 farms

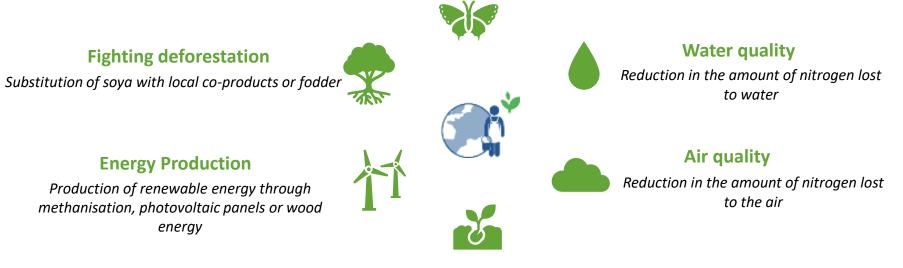


And many Cobenefits that are monitored

% 9

Contribution to biodiversity

Increase the surface or linear areas of meadows, hedges, isolated trees, copses, ponds, etc.



Area of plant cover

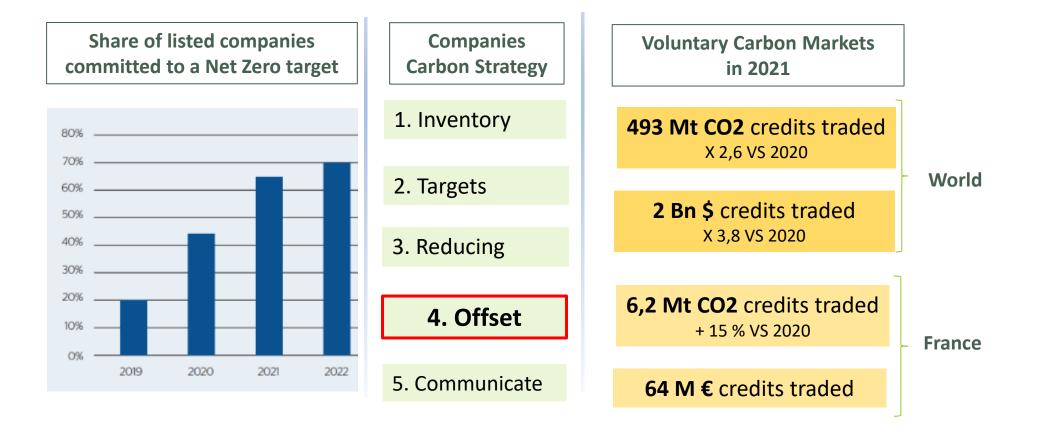
Limit erosion, nitrogen leaching, improve soil fertility and increase carbon storage through soil cover



The project must prevent any significant negative environmental or socioeconomic impacts



A growing corporate interest to contribute to climate action.....

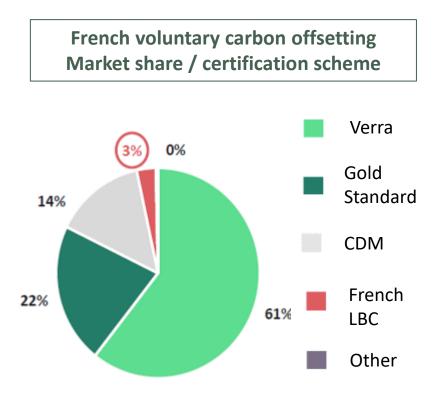




Source Ecoact



But a crucial need to relocate carbon offsetting in Europe to finance the transition to low carbon farming



- Strong price gap between Europe & Extra Europe projects.
- Need to value local/European low carbon projects thanks to :
 - Robust Certification Standards.
 - **Cobenefits** valorisation.
 - Good technical information.
 - Positive communication.
- Need of a European regulation on Carbon Certification that encompasses carbon storage & reduction of carbon emissions.



Thank you for your attention and at your disposal



Email : pierre.raye@fcaa.fr
 Phone : 00 33 6 35 36 57 76

Website : https://france-carbon-agri.fr/





→ Workshop sessions

- . How to build an efficient monitoring and certification process for answering project developers, carbon buyers and public body's needs?
- . What funding mechanisms to support low carbon projects?



Cwrbon Farming

→ Workshop sessions

- . How to build an efficient monitoring and certification process for answering project developers, carbon buyers and public body's needs?
- . What funding mechanisms to support low carbon projects?



How to build an efficient monitoring and certification process?

INSTITUT DE idele

Building a certification framework <i>Certifier</i> authority	farmers, Farr recru <i>Aggreg</i>	nication to , advisors mers' itment <i>ator and</i> levelopers	Assessing the impact of the l proje Partial bud <i>Project deve</i> adviso	ow carbon et Igeting e <i>lopers -</i>	Labe p	tion of the files ling of the project er authority	p - agg and p - buye	ntractualisation process with: gregator, farmer roject develope ers / funders an aggregator Aggregator	r ers
method carbo	idating ls to assess on gains <i>r authority</i>	Building a Simu assess potentia <i>Project</i>	al carbon audit ng a carbon action plan mulation and essment of the ntial carbon gain ect developers - advisors			F			
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Cwrb

Farming

How to build an efficient monitoring and certification process?

Crea

I ATB

INSTITUT DE idele

2 technical visits to monitor the project <i>Project developers -</i> <i>advisors</i>	Final carbon Practices impler contro Real carbor evaluatio <i>Project devel</i> advisor	mentation I n gain on <i>opers -</i>		al verification ndant auditor	credi [.] fı	by the carbon ts buyers / unders gregator	
farm of the impleme Project de	control on e practices entation evelopers - isors	aggrega the certifi rep	ol and ation for final cation oort egator	Recognitio carbon cre <i>Certifier</i> <i>authorit</i>	dits r	Payment to farmers, project developers an aggregator <i>Aggregator</i>	

Cwrbo

Farming

Brainstorming session:

→ What are the risk factors and the success factors for the different steps of the certification process?



How to build an efficient monitoring and certification process? – Workshop restitution

How to mobilize farmers ? How to keep informed advisors ?

Baseline / target

Methods / standardisation

Administrative work

It's a win win project : GHG / biodiversity / economic ...

Contractualisation

Positive communication

5 years: it's long for advisors / farmers, but short for policy makers

A lot of steps





Cwrbd

Farming

How to build an efficient monitoring and certification process? – Workshop restitution



- Risk factors
- Definition of EU CRC framework taking too long
- Strong discrepancies across methods and scientific standards
- Double counting
- Time and cost of monitoring, data robustness
- Low price of carbon
- Carbon tunnel vision
- Greenwashing

- Success factors
- Good definition of common criteria (not necessarily same methodology for everybody)
- Transparency on methology validation
- Communication and education onlow carbon projects
- Technical advisory (very important)
- Robust cost/gain projections for farmers
- Finding the right price for buyers and farmers
- Measure co-benefits

General comments:

- Defining a common vocabulary to talk about this topic is very important there are language discrepancies across countries (ex: certifyer authority vs accreditor
- Valid both for company communication and stakeholders involved in certification process



How to build an efficient monitoring and certification process? – Workshop restitution

C**erbo**n Farming

Responsibility of member states to support farmers, being careful of time-consuming and expensive approachs, lot of documents asked to the farmers, facilitate controls

- **Objective :** Getting carbon credit or most of all certification of the farmer's practices to avoid greenwashing
- Method: having an objective framework common to member states with same kinds of calculation, involving national administration and finding a balance between having method adapted to specific conditions and the number of methods. Clarifying that it is based on result and if the length of the project is adapted to the effect of practices.
 Choosing emissions reductions per kilo or per ha? (extensive systems). Training the independant auditors.
- Audits on farms: Having measurements more precise on carbon soil and verify real carbon storage, and be clear on the models used, making sure they are adapted to specific conditions
- Different tools existing, with different indicators \rightarrow Difficult to decide what tool to use
- **Communication to farmers** : gathering farmers to communicate and avoid top down approach
- Sharing responsibility all along the food chain: Fundings are complementary, what about farmers already good?
- Opportunity for the payment : polluter payer principle

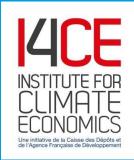




\rightarrow Workshop sessions

- . How to build an efficient monitoring and certification process for answering project developers, carbon buyers and public body's needs?
- . What funding mechanisms to support low carbon projects?







How to finance low carbon projects?

Life Carbon Farming Seminar

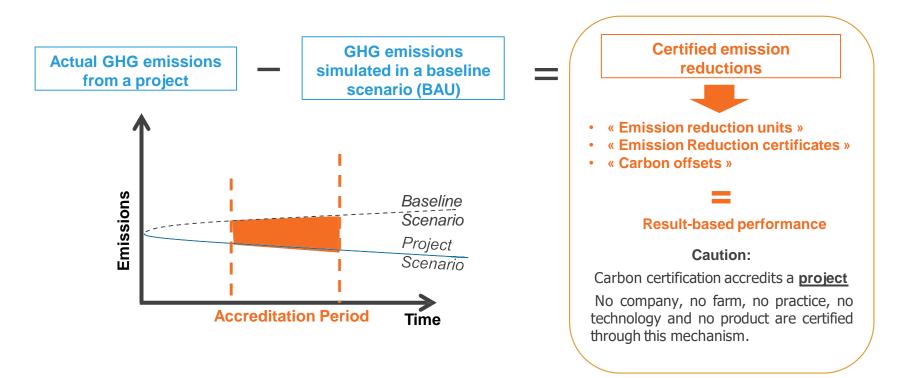
Clothilde Tronquet – Institute for Climate Economics (I4CE)



The carbon certification mechanics (1/2)

A result-based payment calculated from a counterfactual scenario

• Certified low carbon projects are based on a **counterfactual scenario**

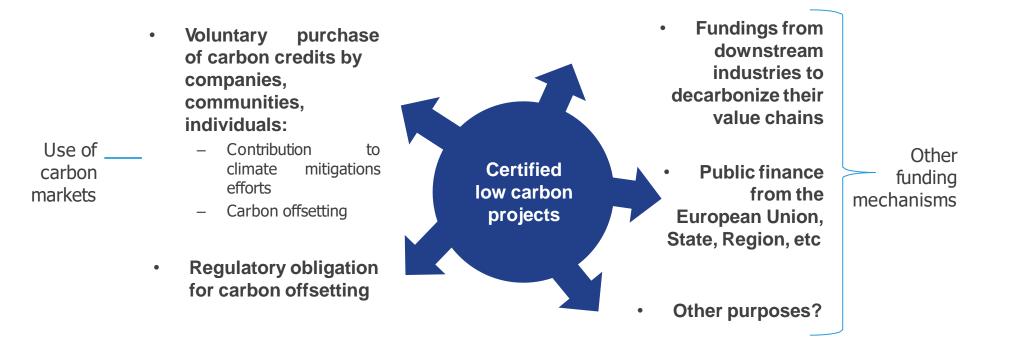


 \succ Carbon certification corresponds to a **performance obligation** (\neq obligation of means)

Fundamental quality criteria

- The measurability and the monitoring of emissions and removals, taking into account possible leakage phenomena.
- Transparency and verification by an independent third party
- Uniqueness and traceability of emission reduction units with th implementation of a registry in order to avoid double counting
- Permanence of emission reductions or management of the nonpermanence risk
- when necessary (carbon :removals in agricultural soils)
- Additionnality: demonstrate the project wouldn't have happen Additionnality: demonstrate the project wouldn't have happen Additionnality: demonstrate the project wouldn't have happen

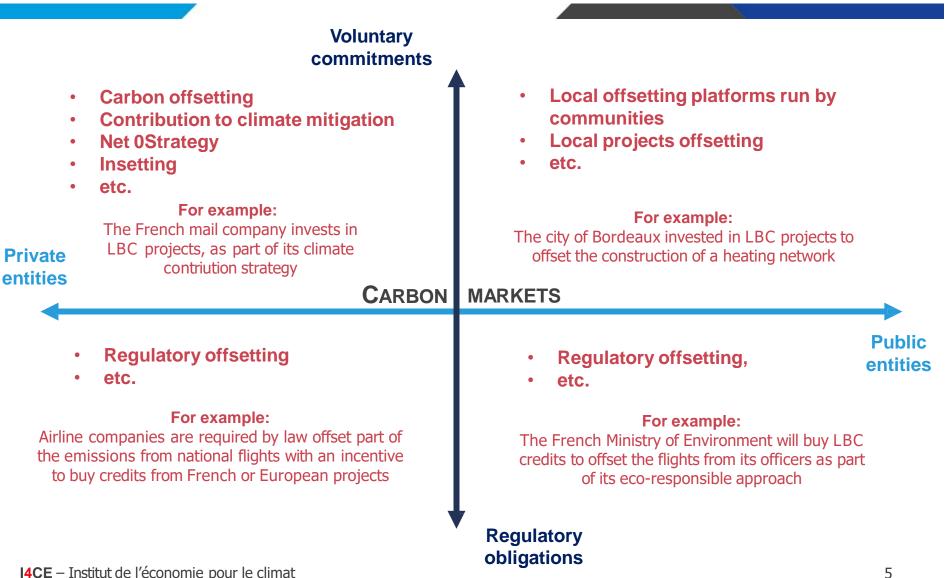
Carbon certification is a multi-functional finance instrument



- Carbon certification refers to a guarantee scheme for positive climate impacts, it goes beyond carbon offsetting
- > A mix of different actors, purposes and tools use certified low carbon projects

Setting the scene

Carbon markets cover various situations



Setting the scene

The limitations of carbon markets

- The mechanics of carbon certification was originally designed for carbon markets
- Carbon markets remain the main funding channel for carbon projects
- They cover various approaches (depending on stakeholders and purposes)

	2020	2021
Transacted volumes *	~ 188 million tCO ₂ eq	~ 500 million $tCO_2 eq$
Market Value *	0,52 billion USD	~ 2 billion USD
Retirements **	~ 100 million tCO ₂ eq	~170 million tCO ₂ eq

But,

• Prices remain low

	Average Price	Minimum Price	Maximum Prixe
International credits (Ecosystem MarketPlace, 2022, sur 2021)	~ 4 \$/tCO ₂ eq	<1\$/tCO2eq	Х
International and national credits from the LBC (INFOCC, 2022, sur 2021)	4,6 €/tCO ₂ eq	1€/tCO₂eq	125 €/tCO ₂ eq
National credits from the LBC (INFOCC, 2022, sur 2021)	31,8 €/tCO ₂ eq	8,20 €/tCO ₂ eq	125 €/tCO₂eq

Other funding opportunities besides and beyond carbon mar

 Financing emissions reductions within scope 3 Premium price for low carbon products Corporate sustainability reporting etc. For example: Biodiesel producer offers premium price for low carbon rapeseed or sunflower 	 Voluntary commitments Subsidies Direct investments Eco-schemes etc. For example: The French Recovery plan financed the carbon balance of a number of farms prior to entering the LBC (« Bons diagnostics carbone »)
Private entities OTHER USES OF	CARBON CERTIFICATION Public entities
 Requirements on sustainable procurements etc. 	 Environmental conditionality of aids Setting up public procurement requirements etc.
	For example: In France, an agri-environmental measure from the CAP consists in commiting to a low carbon transition (using LBC certification)
	Regulatory

Setting the scene

Multiple obstacles to overcome

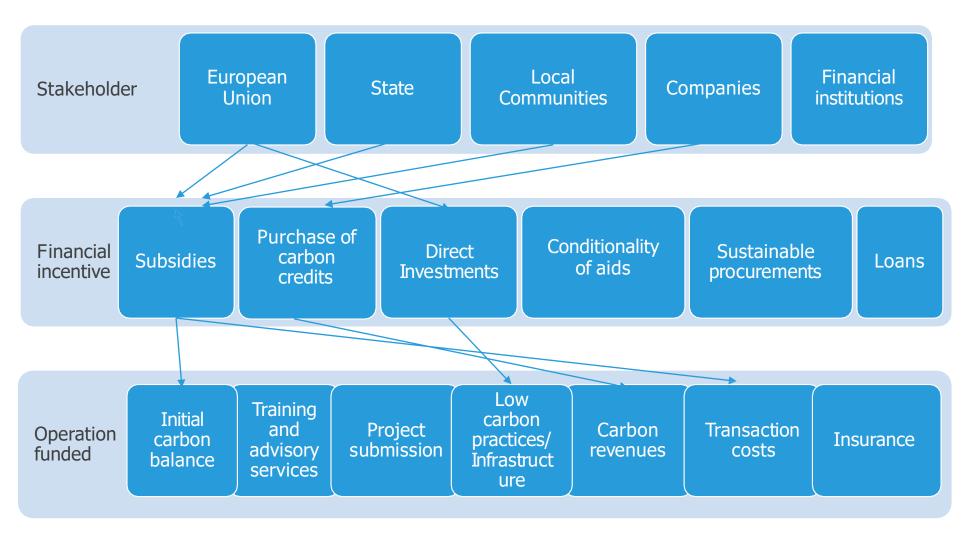
- **FINANCIAL BARRIER** : Carbon projects are expensive. The costs related to the certification engeneering are many, of different kinds and distributed over a long period of time.
- Potential solutions: ► Increase the prices; ► increase the demand for projects; ► multiply the financiers;
 - segment the projects and differentiate the funding mechanisms



Certification costs -Project Recruitment -Project submission -Preliminary Diagnosis -Registration -Auditing/ Verification -Communication -Credit sales

- **TECHNICAL BARRIER** : Carbon certification is complex. It requires technical expertise and training from different actors
- Potential solutions: Provide trainings; Provide advisory services; Incentivise the preliminary diagnosis
- **RISK MANAGEMENT** : The results-based nature of the mechanism requires an advanced risk management system
- Potential solutions: Insurance mechanism; Pooling risks

Developping co-financing schemes



Setting the scene

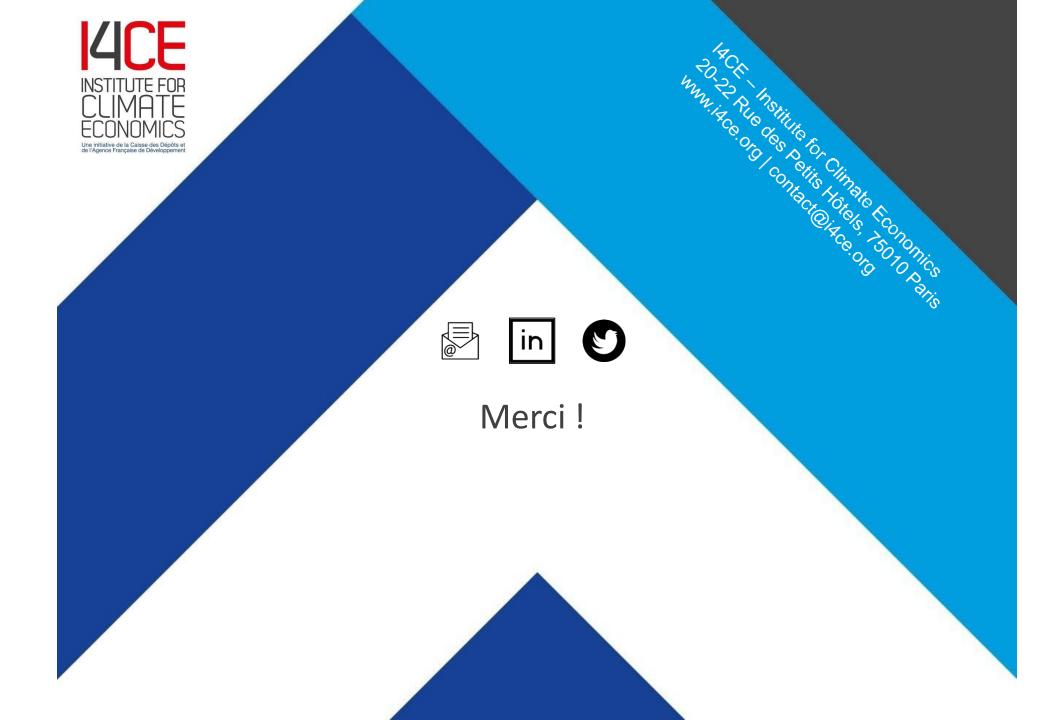
Next step : Coordinate different sources of

- funding and end-uses
 Financial additionnality: need to clarify the possible combinations between public and private support
 - Facilitate combinations of public and private interventions
 - Avoid double funding
- End use claims: need to clarify between regulatory accountability / voluntary commitments / Corporate sustainability reporting
 - Establish pragmatic and coherent accounting frameworks
 - Legitimate double claiming (state /voluntary buyer; between value chain stakeholders)

Workshop Discussion

Questions

- What are the difficulties to finance carbon projects?
 - What kind of funding mechanisms do you use? (type of financer/ instrument)
 - Do you use a combination of fundings (private/public; voluntary/regulatory; carbon revenues/ auxiliary support)?
 - In case you use carbon market finance, is the price/ tCO_2 a barrier to sell carbon credits?
 - Do the carbon revenues from carbon credits cover the wholde projects's costs?
- What kind of funding mechanisms could be directed towards low carbon projects?
 - What instruments? For what purpose?
- Who should pay for what?
 - How could public finance contribute to the development of low carbon projects?
- How to combine different funding mechanisms?
 - Are the public/private, voluntary/regulatory categorizations relevant in your context?
 - What examples/experiences do you have combining public/private funds for environmental projects?
 - What obstacles are there to be overcome to combine effectively private and public funds?



Questions / Answers with a panel of experts



Cwrbo

Farming

Questions / Answers with a panel of experts

Marion Leguiel French Ministry of Agriculture

Pierre Rayé FCAA – France Carbon Agri Donal O'Brien Teagasc Clothilde Tronquet

Cwrbo

Farming





C¥rbðn Farming



LIFE CARBON FARMING – Carbon farming certification and rewarding mechanisms in the agricultural sector CONCLUSION

Brussels – 25/01/2023

