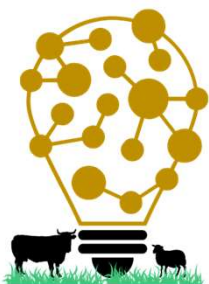


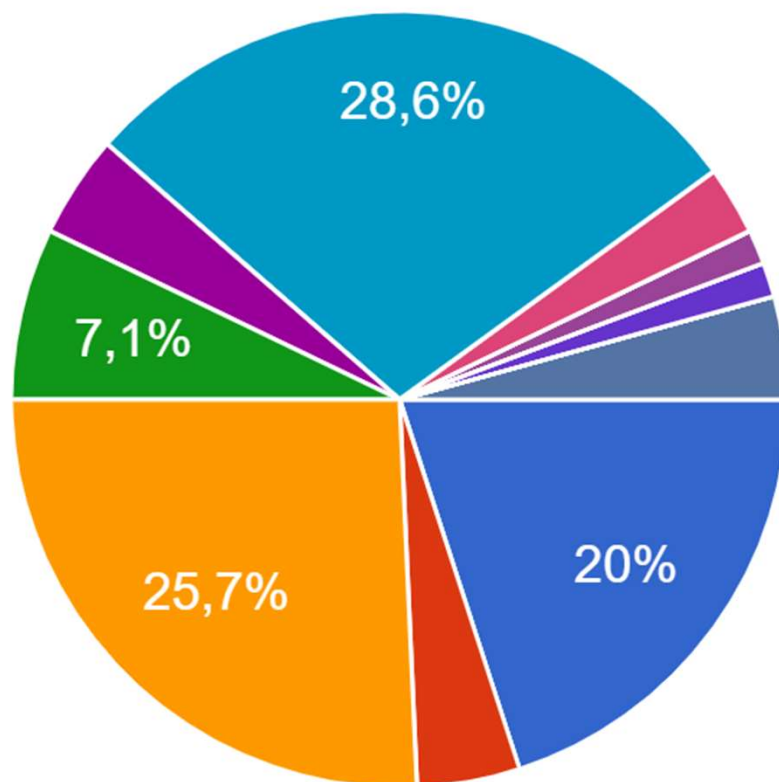
# UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE

- To exchange and capitalize on previous and existing European projects on sustainable livestock production
- To identify collectively the best practices to disseminate this new knowledge to advisors, farmers and the sector's industries
- To develop a network for future projects





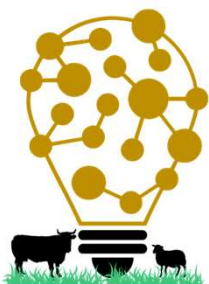
# DIVERSITY OF COUNTRIES



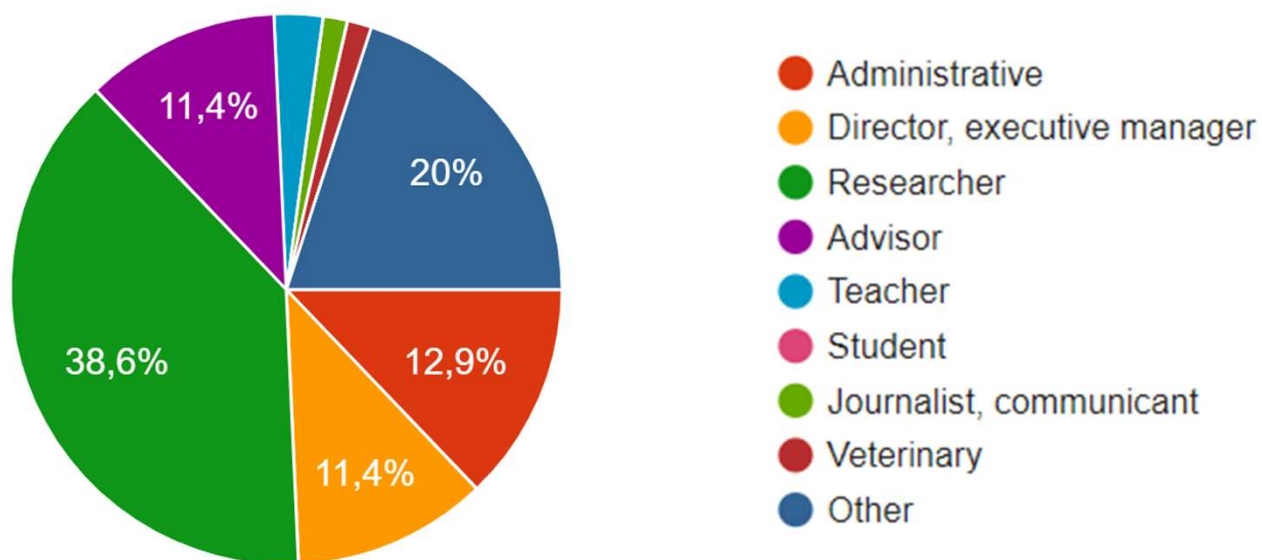
- France
- Germany
- Belgium
- Spain
- Irlande
- Italy
- Romania
- Nederlands
- Tunisia

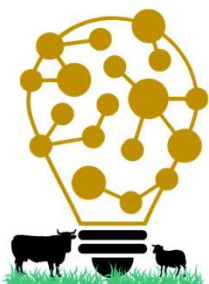
And also Portugal, Greece



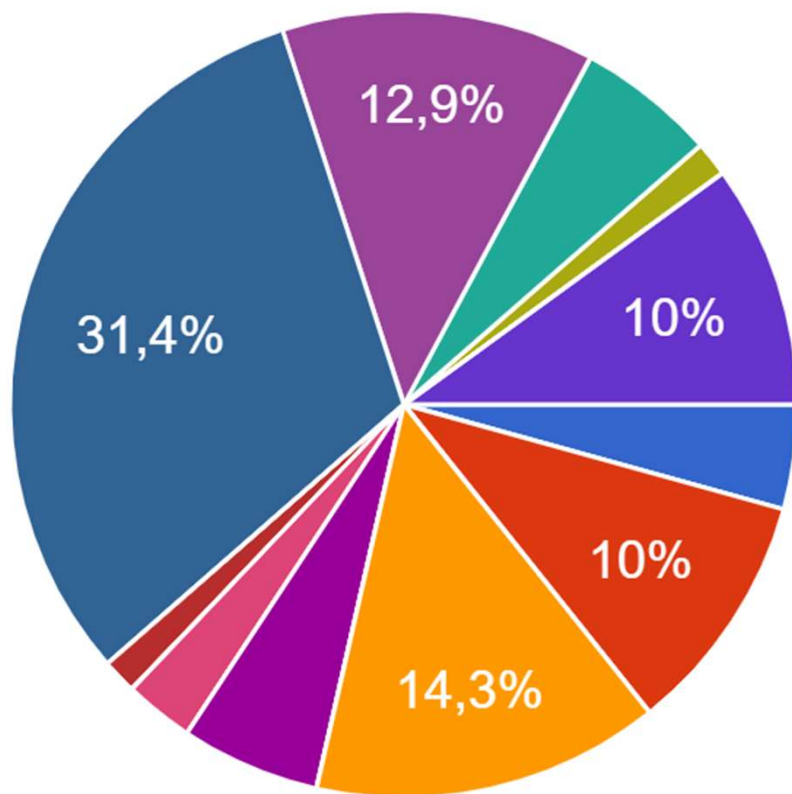


# Function in the organisation





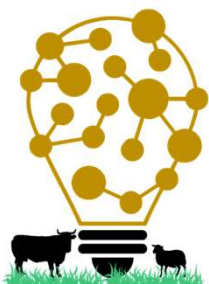
# YOUR ORGANISATIONS ARE



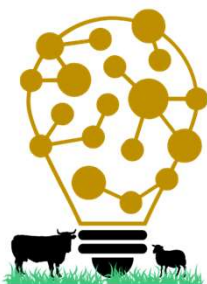
- Farmer
- Association, Fédération, Syndicate
- Administration
- Technical advisor company
- Food company ou cooperative
- Agroequipment company
- Research institute
- Technical institut, R&D
- University, teaching organisation
- Press-Media
- Other

But also European Institution, Climate NGO, Ecosystem restoration





NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE



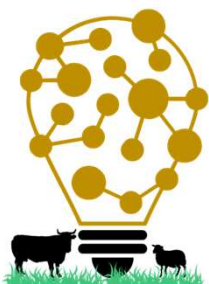
# LIST OF PROJECTS REPRESENTED

- LIFE GREEN SHEEP
- LIFE CARBON FARMING
- ECOLAMB
- LIFE CO2SAND
- CLIMATE FARM DEMO
- CLIENFARMS
- CREDIBLE
- CLIMATE SMART ADVISORS
- LIFE BEEF CARBON
- LIFE SHEEPTOSHIP
- CARBON NEUTRAL FARMING
- PRIMA PASTINNOVA
- LES 2 PIEDS SUR TERRE
- LIFE MULTI PEAT
- LIFE PEAT CARBON
- LIFE AGRICLIMATECHANGE
- LIFE MARONESA
- CARBON FARMING FRAMEWORK FOR IRELAND
- NEFERTITI
- FORAGE4CLIMATE
- SOILVALUES
- SERVICIOS ECOSISTÉMICOS DEL PASTOREO TRADICIONAL
- SOLUTION4FARMING
- SUREPASTOR
- NEW NORMAL FOR SUSTAINABLE DAIRY IN IRELAND'

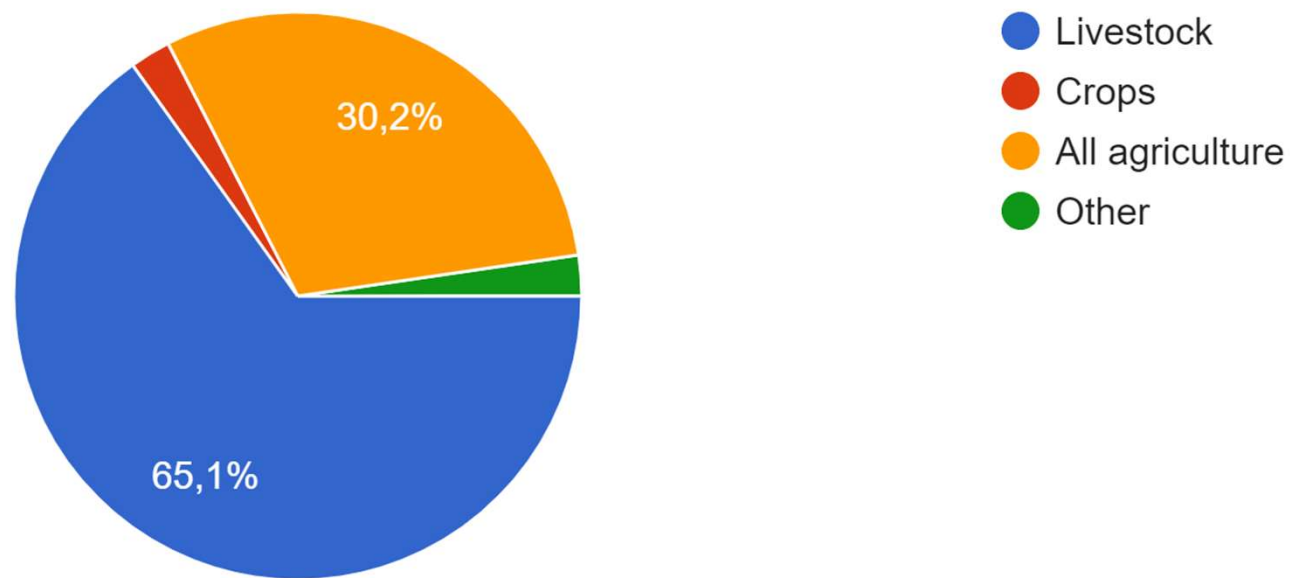


BETWEEN 2010 AND 2030 !

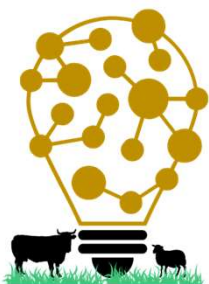
NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE



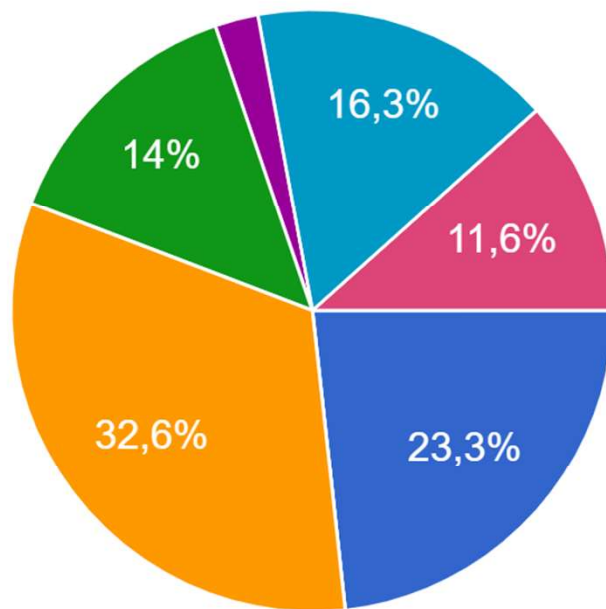
# TYPE OF AGRICULTURAL SYSTEM ADDRESSED



NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE



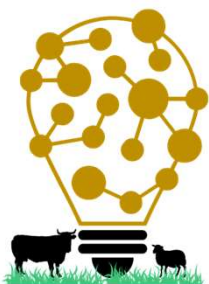
# MAIN SUBJECT



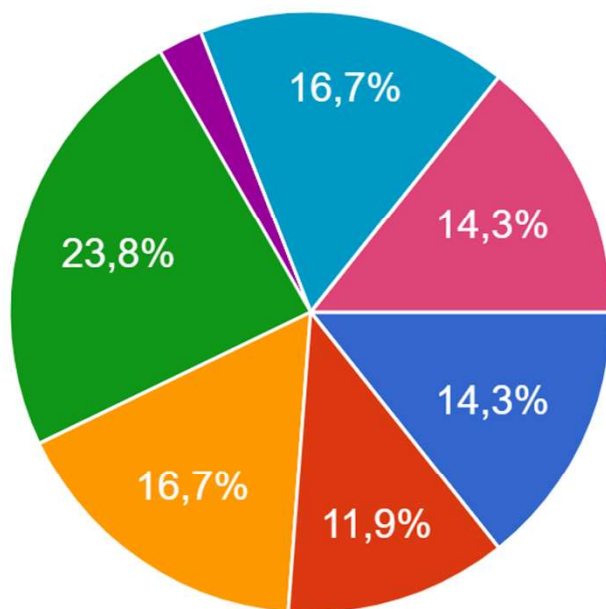
- Mitigation
- Adaptation
- Mitigation and adaptation
- Environmental Impact
- Biodiversity
- Sustainability in general
- Other





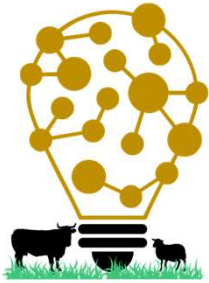


# MAIN PURPOSE OF THE PROJECT



- Research
- Tool conception/comparison
- Knowledge repository (references, solutions, levers, etc)
- Experimentation/monitoring on farms
- Training
- Dissemination
- Other

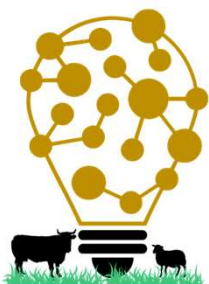




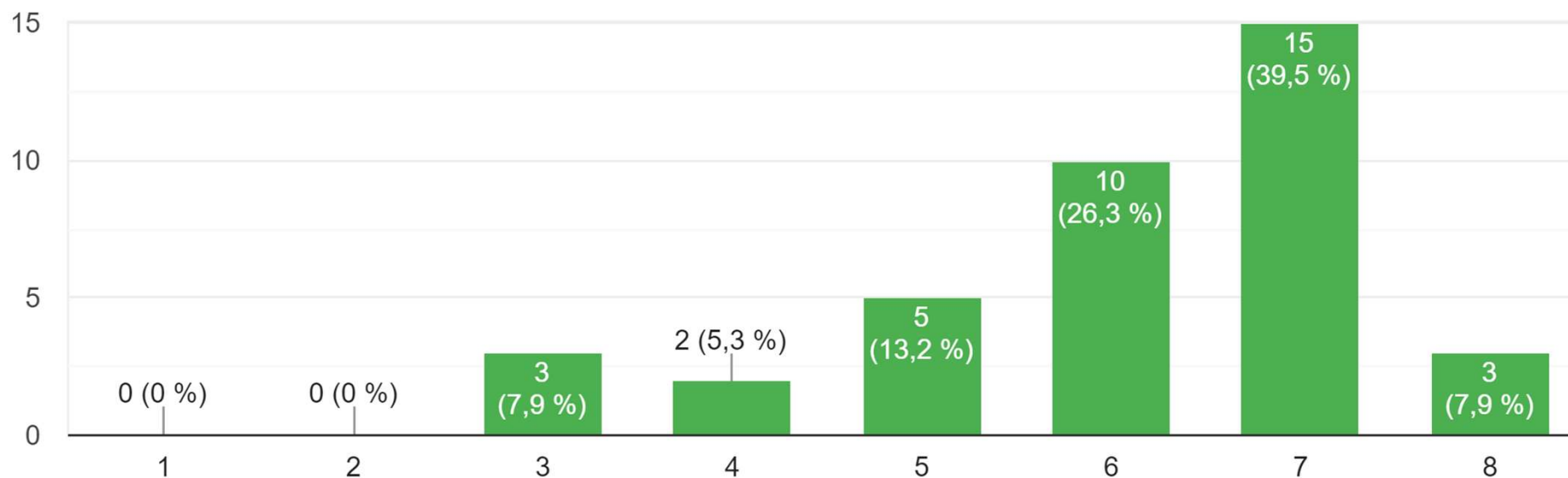
## BUT ALSO

- Innovation Action
- Building a financial reward system based on results to reduce the carbon footprint of livestock farms
- Development of business models
- Capacity building in advisors
- Development of carbon farming framework

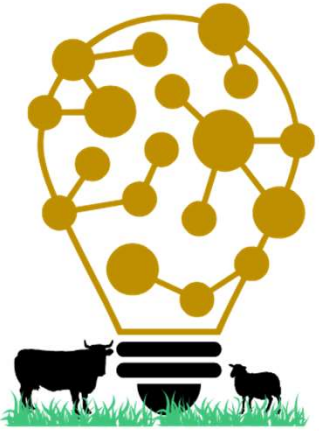




# RATE OF THE PROJECT BETWEEN RESEARCH AND FIELD DISSEMINATION



NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE

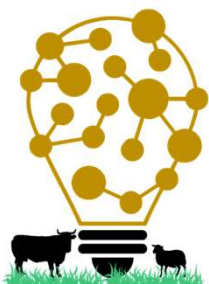


# INTRO & PLENARY SESSION

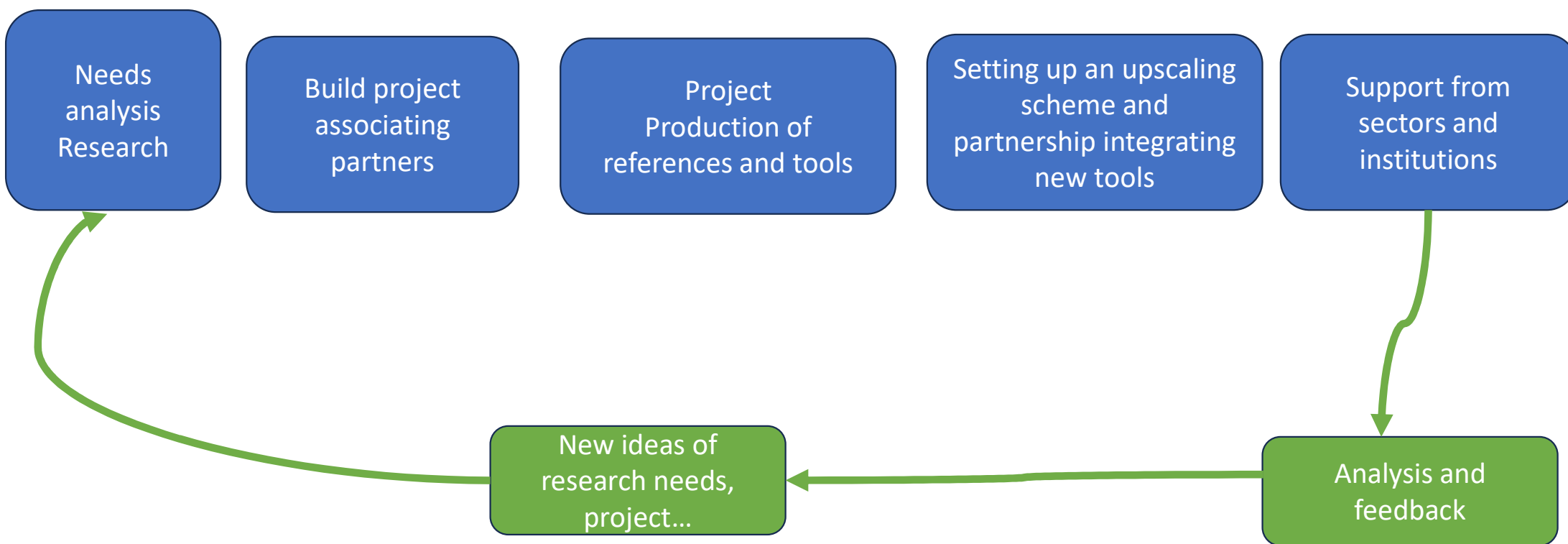
Sindy Throude (LIFE GREEN SHEEP) and  
Anaïs Lhôte (LIFE CARBON FARMING)

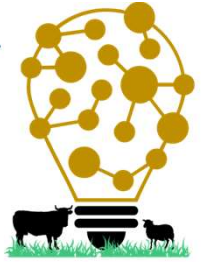
NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE





# A networking day to explore the different steps of dissemination, from research to implementation





# PROGRAM OF THE DAY

- 9h00 : Registration & welcome coffee
- 9h30-11h30 : **Plenary session**. *How to upscale : crossed views from institutions to farmers*
- 11h30 – 12h45 : **Workshops**
- 12h45-13h45 : Networking lunch
- 13h45-14h30 : **Posters' Session**
- 14h30-15h45 : **Workshops**
- 16h00-17h00 : **Final plenary session and workshops summary**

## 5 WORKSHOPS

How to build strong partnerships at the beginning of the project to involve farmers and advisors?

What skills and methods are needed to support dissemination of low carbon & sustainable practices ?

How to involve stakeholders, sectors' bodies and institutions in upscaling low carbon & sustainable practices ?

How can farmers be rewarded for implementing these new practices on their farm ?

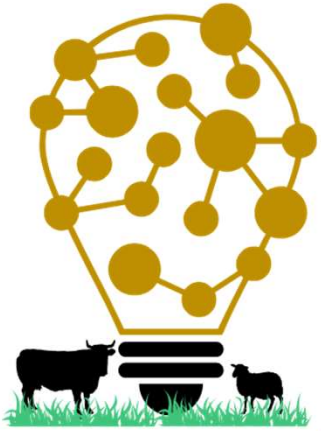
How can we capitalize the knowledge from European low carbon farming initiatives for research, advice and new projects ?

# Plenary session.

Questions on [menti.com](https://www.menti.com)

74226939

- Introduction– Anaïs L’hôte (LIFE Carbon Farming) & Sindy Throude (LIFE Green Sheep)
-  **European Policies on Carbon Farming** Valeria Forlin (DG Clima)
- **France : French initiative for a low carbon strategy** (training, tools, partnerships, financial support) by Idele – Josselin Andurand
- **Ireland : Supporting farms technical and environmental improvements** by Teagasc – Donal O’Brien
- **Spain : How does the professional sector support the dissemination of low carbon practices ?** by Asoprovac – Matilde Moro
- **Involvement of agrifood industries in decarbonizing dairy sector** – Clémence Jouan, Danone
- **How to reward farmers for supporting change of practices ?** I4CE – Clothilde Tronquet
- Q&A



**ClieNFarms**  
Climate Neutral Farms

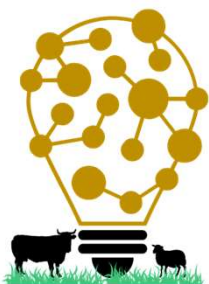
# European Policies on Carbon Farming

Valeria Forlin – DG CLIMA

NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE





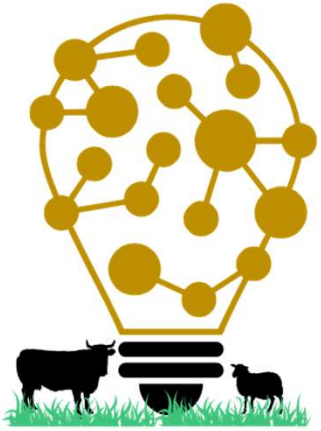


# Plenary session.

Questions on [menti.com](https://www.menti.com)  
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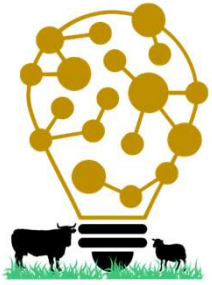


# French initiative for a low carbon strategy

Josselin ANDURAND - Idele

NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE





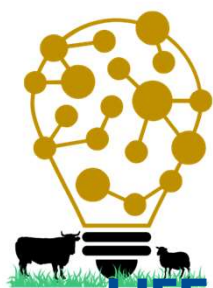
# From research to farm implementation

Needs  
analysis

Research

Build project  
associating  
partners





# From research to practice Initiatives for disseminating low carbon practices

## LIFE CARBON DAIRY



## LIFE BEEF CARBON



## LIFE GREEN SHEEP

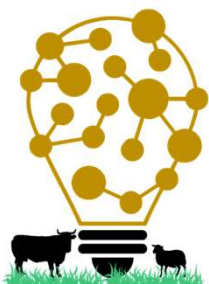


## Dairy4Future



## SUSTAINABLE GOAT FARMING





# From research to farm implementation

Needs  
analysis

Research

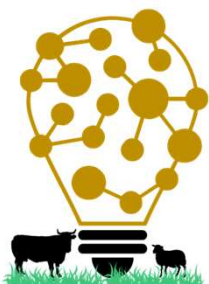
Build project  
associating  
partners

Project  
Production of  
references and tools

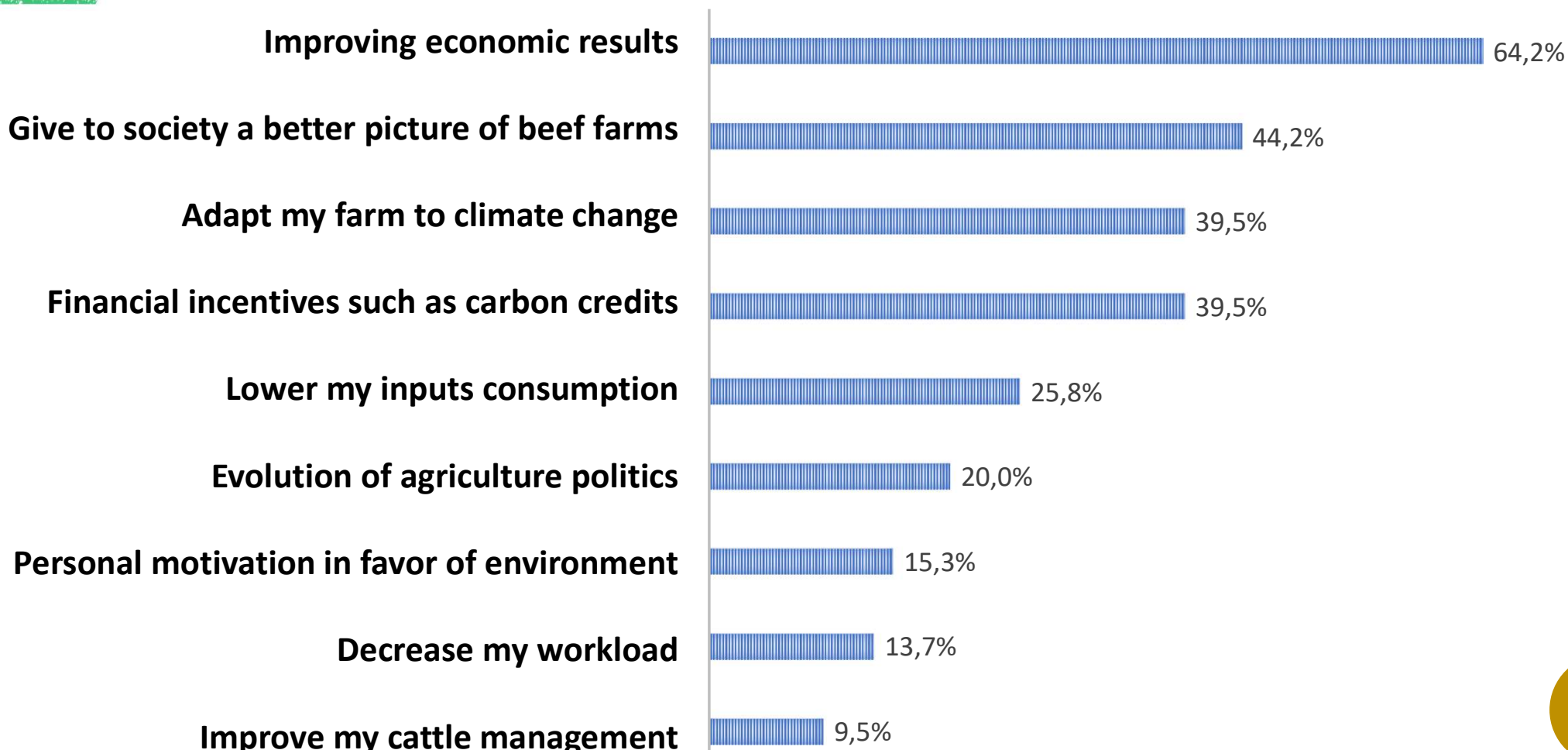
Tools development adapted  
to partners/advisers/farmers  
needs

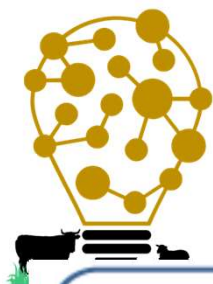
Work with farm advisers to  
disseminate





## Farmers feedback :Reasons that will incite you to implement low carbon practices



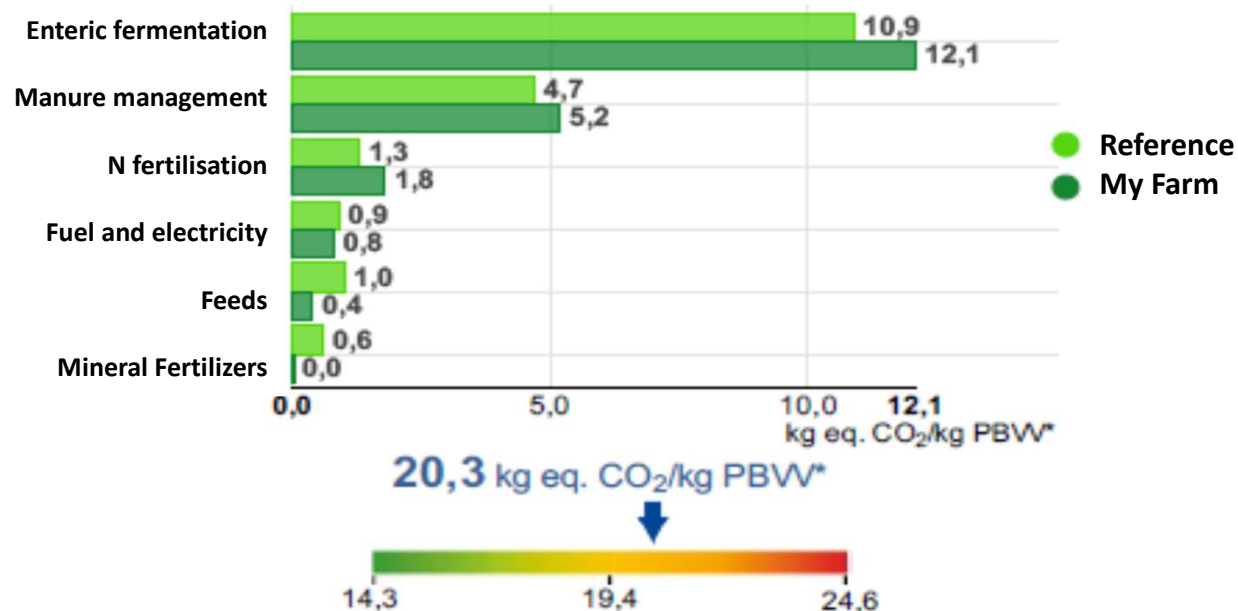


# The tool : CAP2ER

## Link environmental results and technical indicators



### GHG Emissions (CH<sub>4</sub>, N<sub>2</sub>O CO<sub>2</sub>)

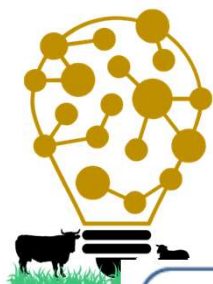


Making a link  
between

Environmental  
results

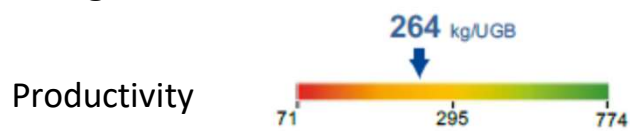
And

Farmer practices

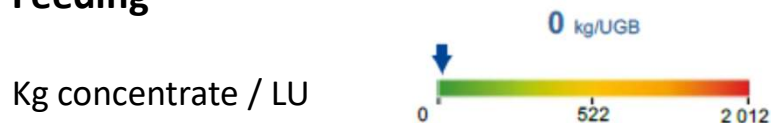


# Example of a CAP2ER restitution

## Cattle management

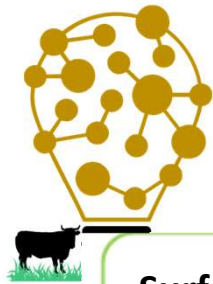


## Feeding



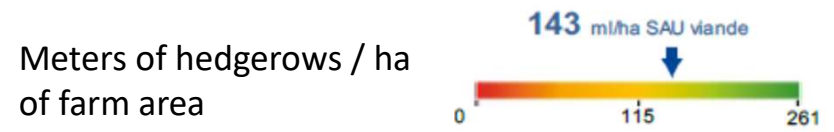
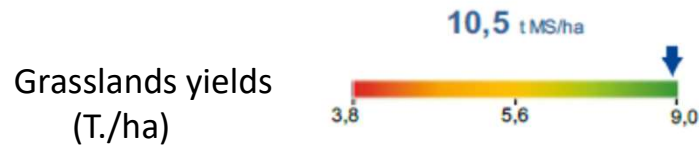
Link between technical indicator and carbon performance





# Example of a CAP2ER restitution

## Surfaces



## Manure management

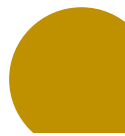
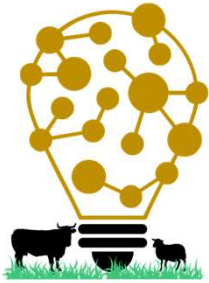


## Energy



Link between technical indicator and carbon performance







# Farmer empowerment

## EARL LA CERISAIS

Ferme innovante du programme Life Beef Carbon

Suivi réalisé par la Chambre d'agriculture de Bretagne – 29/08/2018



« Je suis particulièrement sensible aux aspects environnementaux notamment à travers les préoccupations de ma clientèle et les messages que l'on peut entendre dans les médias. Mon système herbagé et les haies de mon exploitation me permettent de capter beaucoup de carbone mais il me reste des marges de progrès technique notamment au niveau de la reproduction du troupeau. Les actions qui ont permis de réduire mon empreinte carbone ont également renforcé la rentabilité de mon exploitation. » J. BOULET

### MON EXPLOITATION

Département 35  
Système NE de boeufs  
SAU 76,5 ha  
dont SFP 60,4 ha  
Nombre d'UGB 132 UGB

Chargement apparent 2,2 UGB/ha SFP

### MES CONTRIBUTIONS POSITIVES

MON ATELIER STOCKE 20 t de carbone  
MON ATELIER ENTRETIEN 32 éq ha de biodiversité  
MON ATELIER NOURRIT 286 personnes

### MON ATELIER VIANDE

**Mon troupeau**  
Race majoritaire Limousine - 34  
Production de viande 31333 kgvv  
Nombre d'UGB 132,6 UGB  
Production de viande 237 kgvv/UGB  
Vaches allaitantes 51,48  
Taux de finition 99%  
Nombre de vêlages 58  
Type de bâtiment majoritaire Aire pavée intégrale

**Mes surfaces**  
SAU viande 60,4 ha  
SFP viande 60,4 ha  
Prairies permanentes 27,9 ha  
Prairies temporaires 27,8 ha  
% maïs/SFP 8%  
Linéaire de haies 3500 ml  
Chargement apparent 2,2 UGB/ha SFP viande  
Pression en azote organique 185,8 kg N/ha viande

### GAZ À EFFET DE SERRE ET STOCKAGE DE CARBONE



EARL LA CERISAIS – Ferme innovante du programme Life Beef Carbon

### PLAN D' ACTIONS CARBONE

	Emissions brutes	Stockage	Empreinte nette
Résultats de l'année du diagnostic initial*	22,5	2,2	20,3
Résultats après la mise en œuvre du plan d'actions*	15,1	2,5	12,6
Variation prévisionnelle (%)	-33%	+13%	-38%

(\*): à exprimer en kg eq CO<sub>2</sub> / kg viande vive produite

### ACTIONS ÉVOQUÉES ET IMPACTS

LEVIER D'ACTION ENVISAGÉ	INDICATEUR - UNITE	SITUATION ACTUELLE	OBJECTIF	RAPPORT IMPACT BCD. GES	INCIDENCE GES
1 Réforme rapide des UGB improductifs (VA non pleines, intervalle dernier vêlage/réforme, phase de finition moins longue)	kg vv/UGB	237	353	Rentable	-21%
2 Réduire la fertilisation azotée minérale	uN/ha	132	77	Rentable	-5%
3 Augmentation surfaces en prairies et baisse du chargement	ha	55	81	Rentable	-4%

#### FOCUS 1 Levier d'action n°1

**DIFFICULTÉS**

- Maîtrise des conditions de vêlage
- Choix des taureaux

**RISQUES**

- Augmentation des charges opérationnelles

#### ACTIONS À METTRE EN PLACE

- Réaliser un plan d'accouplement
- Etablir un programme sanitaire
- Echographie des génisses mises à la reproduction
- Meilleure surveillance des vaches
- Passer en pâturage tournant avec aménagement de paddocks

#### FOCUS 2 Levier d'action n°3

**DIFFICULTÉS**

- Maîtrise de la conduite des cultures fourragères (conditions de pousse, de récolte et de conservation), dépendant des conditions pédoclimatiques

**RISQUES**

- Privilégier la qualité à la quantité (manque de stocks sur l'année)

#### ACTIONS À METTRE EN PLACE

- Implantation de 2 ha de luzerne

Train innovative farmers for

Communication

and

Peer to peer demonstrations



# Technical sheets of mitigation practices



Réduire les émissions de gaz à effet de serre en production bovine



FICHE 3

## Renforcer son autonomie

La consommation d'un fourrage de qualité permet une meilleure digestibilité et une diminution de la consommation de concentrés.

En devenant plus efficace, le système permet une réduction des émissions de GES.

	Témoign dégradé		Simulation
	PT courte durée + RGI	PT longue durée + méteil	
Système fourrager			
Concentré kg/UGB	870	740	
Fertilisation azotée minérale en kg N/ha	74	64	
<b>Variation de l'empreinte carbone nette</b>			<b>- 9%</b>
Empreinte carbone nette en kg eqCO <sub>2</sub> /kgvv	15,4	13,7	
Emission brute de GES en kg eqCO <sub>2</sub> /kgvv	19,7	18,4	
Stockage de Carbone en kg eqCO <sub>2</sub> /kgvv	4,4	4,7	
EBE	78 000 €	83 000 €	
<b>Variation de l'EBE</b>			<b>+ 6,4 %</b>



### POURQUOI ?

Pour faire face aux différents aléas (sécheresse estivale récurrente, volatilité des prix, dégâts de ravageurs...), il est indispensable de renforcer son autonomie en sécurisant ses stocks fourragers. Ces techniques répondent aussi bien à une problématique d'adaptation au changement climatique qu'à un objectif de réduction des émissions de gaz à effet de serre.

### DANS QUEL CAS ?

- Une situation où on achète du fourrage (lorsque la situation est subie)
- La consommation en concentrés est élevée
- La surface fourragère est sous-valorisée
- Un déséquilibre entre troupeau et potentiel des surfaces
- Une gestion des animaux improductifs (cf fiches productivité)

### MÉTHODOLOGIE

Le témoin retenu est le cas-type modélisant un élevage naisseur-engraisseur de vaches lourdes type veau d'Aveyron et du Segala : 65 villages sur 130 ha de SAU dont 60 ha d'herbe. La consommation en concentrés varie de 600 à 1200 kg de concentrés par UGB sur ce type de système.

La simulation sous Cap2ER a modélisé le remplacement du ray grass d'Italie par du méteil et l'implantation de prairie temporaire à flore variée de plus longue durée. La meilleure valorisation des prairies permet de récolter autant de fourrage en augmentant la surface fourragère de 4 ha (pris sur la sole de tournesol). Le meilleur équilibre Azote/énergie des fourrages permet de diminuer la consommation de 10 tonnes de céréales autoconsommées et 2 tonnes de concentrés achetés. L'augmentation de légumineuses permet une baisse de 10 unités d'azote par hectare. Les performances du troupeau (productivité et poids de carcasse) sont identiques.

### Avant tout, optimiser la gestion de l'herbe

Une meilleure valorisation de l'herbe permet de limiter les coûts de production. Cela passe par la mise en place du pâturage tournant. La sortie précoce des animaux permet de pâturer l'herbe avant épiaison et favorise le déprimage. La fauche aux dates optimales de récolte permet de gérer les surplus d'herbe tout en ayant des fourrages de meilleure qualité. (cf fiche pâturage et fertilisation).

### Planter des prairies multi-espèces

Favoriser l'évolution de la flore des prairies permanentes vers davantage de légumineuses et planter des prairies temporaires multi-espèces avec légumineuses sont des facteurs favorables à la réduction des impacts environnementaux par une moindre utilisation des engrais de synthèse et une meilleure qualité des fourrages.

Les prairies multi-espèces permettent de sécuriser les rendements fourragers et d'améliorer la valeur alimentaire des prairies. Cette diversité permet une plus grande souplesse d'utilisation et constitue des prairies à usages mixtes pâture et fauche. La présence de légumineuses (jusqu'à 40%) permet de réduire la quantité d'engrais azoté et d'obtenir un fourrage équilibré.

Allonger les prairies temporaires limite leur retournement et ainsi le déstockage de carbone. Les prairies peuvent s'inscrire dans des rotations plus longues, plus diversifiées, ce qui a des conséquences positives sur le fonctionnement du sol, le lessivage des nitrates.

### Le sursemis : pour entretenir les prairies

Le sursemis des prairies permet de réintroduire dans un couvert prairial vieillissant des espèces fourragères productives et de bonnes qualités (graminées, légumineuses, ...). Cette technique va augmenter le rendement des prairies ainsi que la qualité des prairies temporaires ou permanentes. La réussite va dépendre des conditions de mise en place et post-sursemis.

### Des méteils immatures

Les méteils ensilés, permettent de faire des stocks avant la période de déficit fourrager et d'implanter une dérobée d'été. Cette culture est peu exigeante en intrants azotés et en pesticides.

### Des dérobées d'été

Elles vont permettre de faire des stocks ou d'avoir de la pâture en période estivale. Le semis doit intervenir rapidement après la récolte du précédent pour qu'elle termine son cycle de végétation et être disponible au moment souhaité. Le rendement dépendra de la préparation du sol et des conditions post-semis.

### TÉMOIGNAGES

« J'ai atteint l'autonomie fourragère en 3 ans. Depuis plusieurs années, j'utilisais des coproduits qui demandaient une distribution quasi quotidienne toute l'année. Le prix d'achat augmentant sensiblement, nous avons étudié avec mon conseiller la façon d'arrêter ces achats. J'ai mis alors en place des prairies productives tout en réduisant la consommation de concentré achetés. Le pivot de la réussite de cet axe est la gestion, le renouvellement des prairies avec des fauches précoces de qualité mais surtout le pâturage tournant. Tout cela a permis de passer d'un rendement d'herbe valorisé à 5 TMS/ha d'herbe à aujourd'hui 6,5 TMS en trois années. Je n'ai jamais eu autant de fourrage en stock et de qualité avec des performances animales qui ont même progressé. En continuant sur cette voie, nous pensons pouvoir atteindre les 8 t MS/ha dans quelques années. »



Sébastien HOUIS (GAEC Élevage des Mortiers), éleveur de 120 VA parthenaises dans la Loire-Atlantique



« Je sais aujourd'hui en autonomie alimentaire totale pour mon troupeau. Pour les fourrages j'enfile près de 30 ha au total entre le RGI et le méteil fourrager pour l'hiver et j'enrabanne autour de 5 ha pour l'été. Après mon assolement de méteil je sème mes luzernes au printemps. Ma rotation principale est de trois pailles (blé, orge, triticale) suivies d'un RGI ou d'un méteil fourrager et de quatre années de luzerne. Pour les concentrés, je produis ma protéine avec de la féverole et du lupin d'hiver que je mélange à hauteur de 3-5% dans le mélange. En tout il me faut près de 3,5 tonnes de concentrés à produire pour engraisser l'ensemble de mes animaux et compléter le troupeau (astour d'3 tonnes/lgh/an). »

Bernard DUCROS (Elev de la Bouyssel), éleveur dans le Tarn.



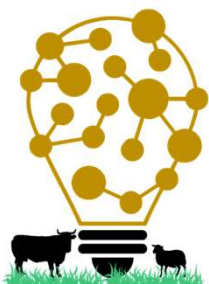
- AFPP : guide technique des mélanges fourragers à base de céréales et de légumineuses
- AFPP : Mélanges de semences pour prairies de courte et moyenne durée (moins de 3 ans) et mélanges de semences pour prairies de longue durée (3 ans et plus)
- GNIS : Réglette « Cultures dérobées fourragères : une source possible de fourrage supplémentaire non négligeable » à commander gratuitement sur le site du GNIS

Mai 2020 - Référence IDELE : 0020 304 009  
Crédit photos : Hilda Saenova, CA Tarn

Rédaction : Estelle DELARUE (Chambre d'Agriculture du Cantal), Jean Bernard MIS (Chambre d'Agriculture du Tarn), Bénédicte LOMELET (Seenoviva), Mathieu VELGHE (Institut de l'Élevage- IDELE)



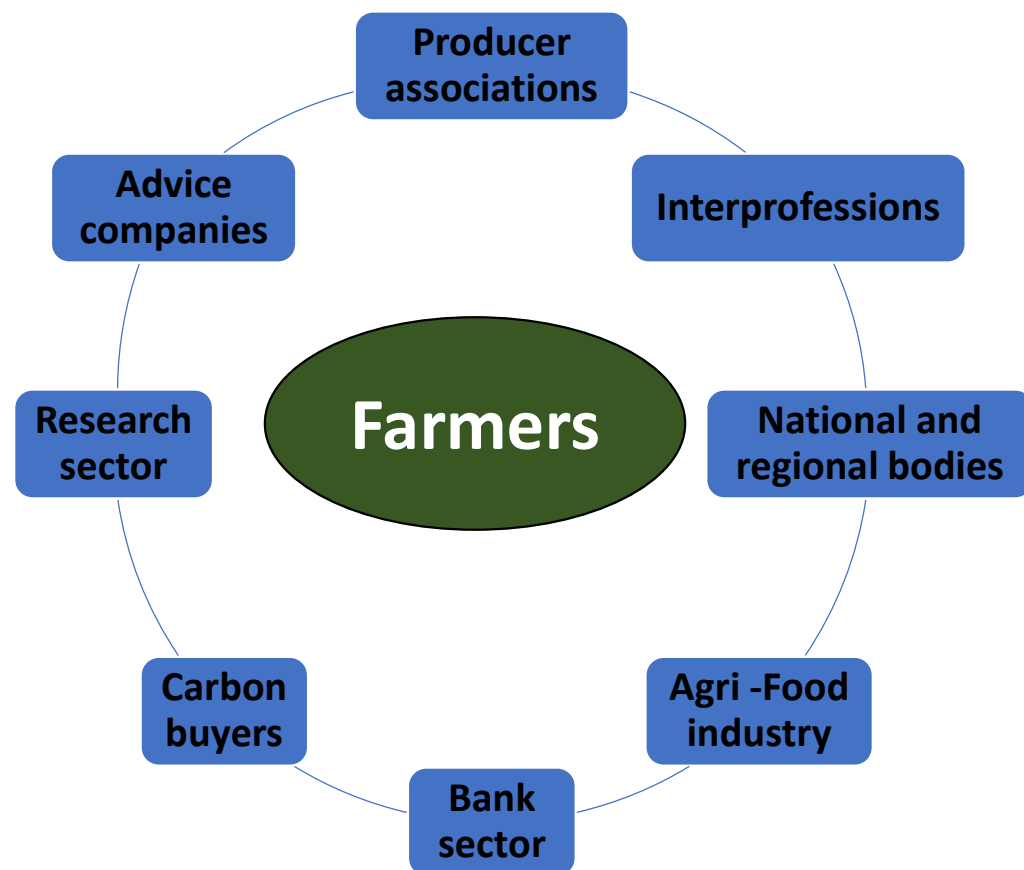
- Economic impact
- Technical breaks
- GHG mitigation potential
- Farmers and advisers testimonies

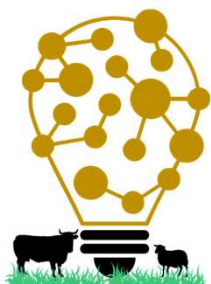


# Upscaling : the partnership is crucial to success

## • National & EU levels

- Research activities and experimentation
- Common framework (methodologies, tools,...)
- Funding solutions





# Upscaling, correct and deploy

Needs  
analysis

Research

Build project  
associating  
partners

Project  
Production of  
references and tools

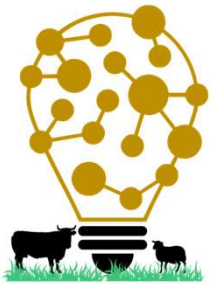
Setting up an upscaling  
scheme and  
partnership integrating  
new tools

Support from  
sectors and  
institutions

Tools development adapted to  
partenrs/advisers/farmers needs

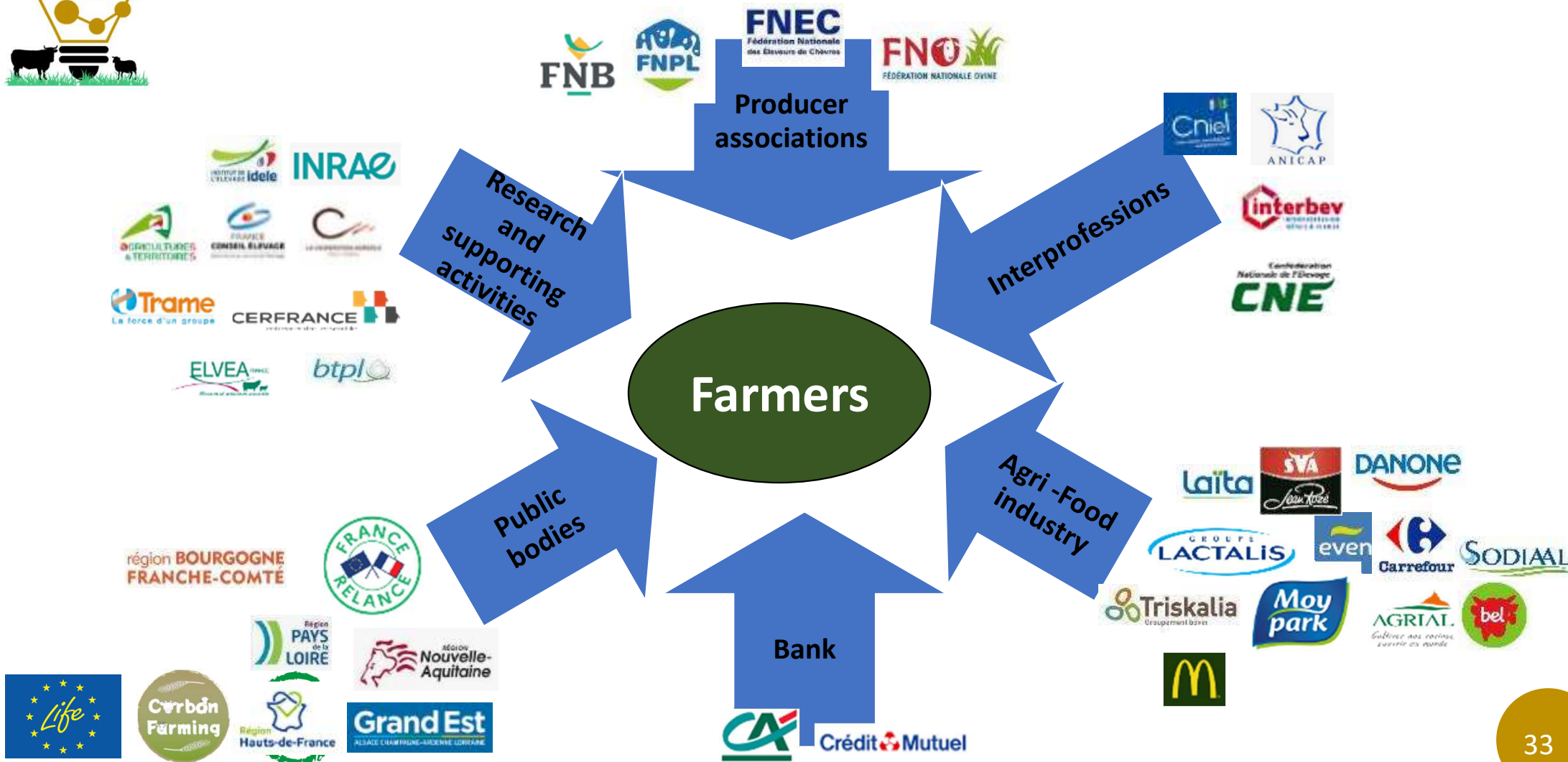
Work with farm advisers to  
disseminate

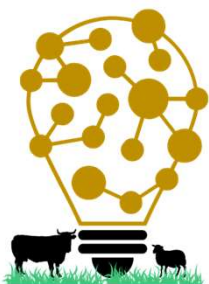




# French partnership developed for involving farmers

## Convergence of the messages





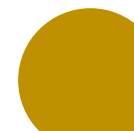
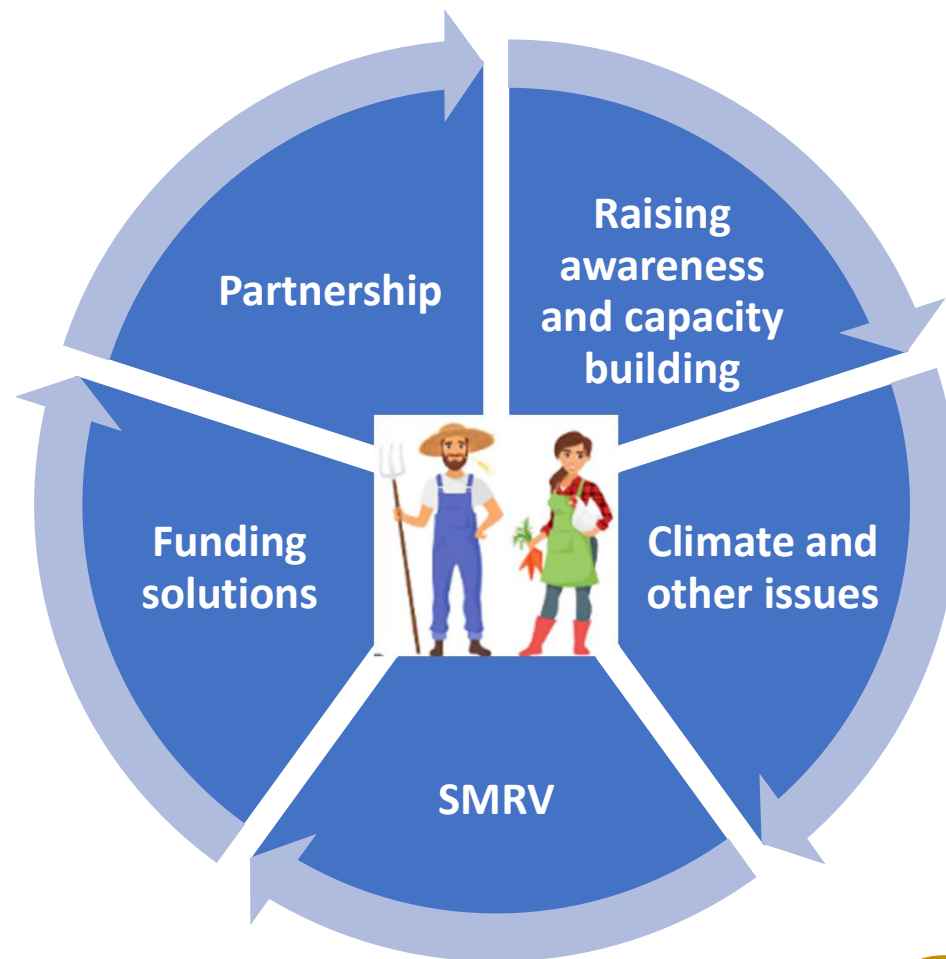
# Conditions for upscaling carbon farming

## Farmers oriented

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

## Training farmers and advisers

Farm open days, conferences, self assessment, press...





# Coordinating funding sources to support carbon transition



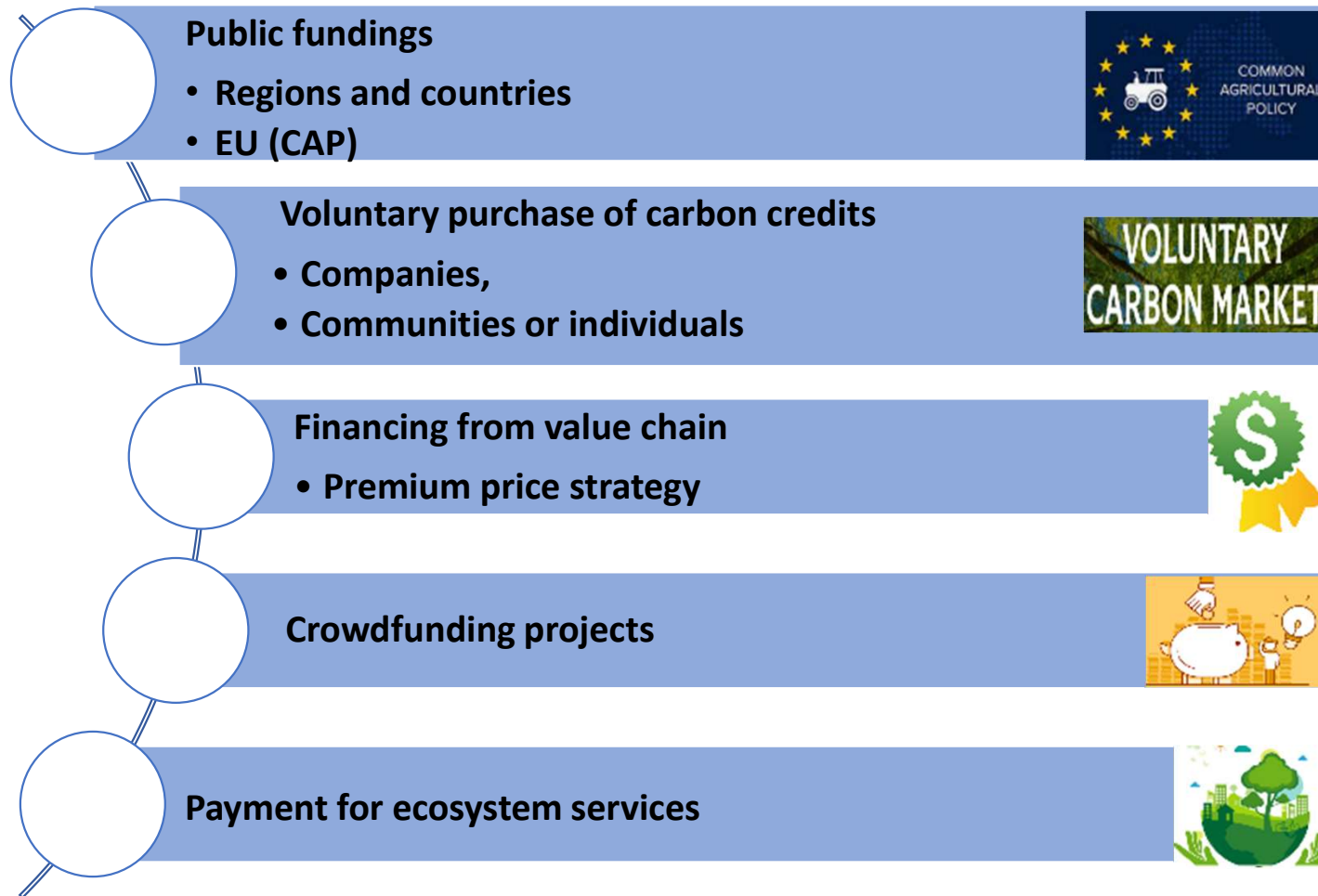
## MRV costs

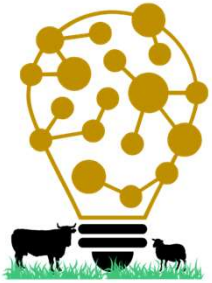


## RISK AVERSION

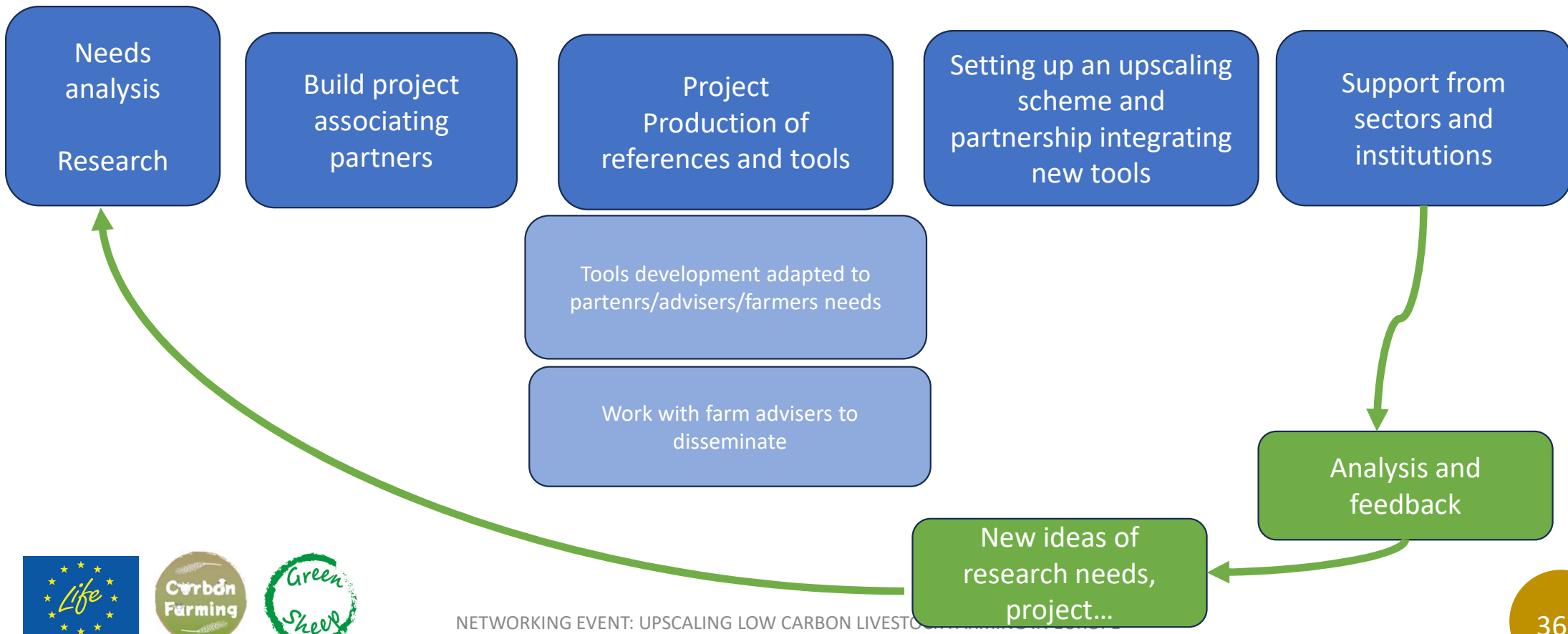


## INVESTMENTS NEEDED





# Upscaling, correct and deploy

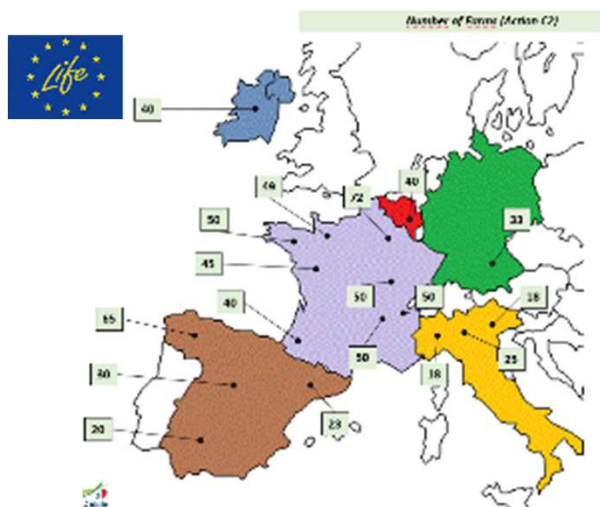




# Upscaling low carbon initiatives in EU agricultural systems

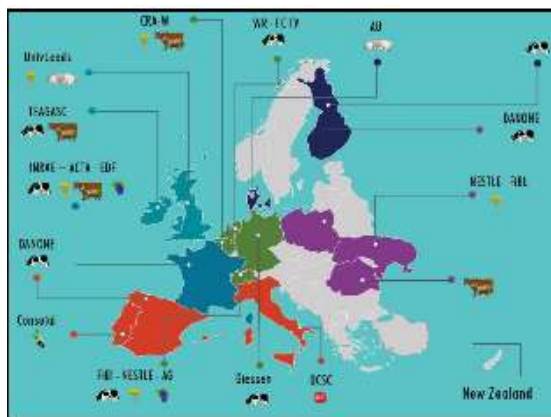
## Developing carbon rewarding mechanisms in agriculture

**LIFE CARBON FARMING – 2021/2027**



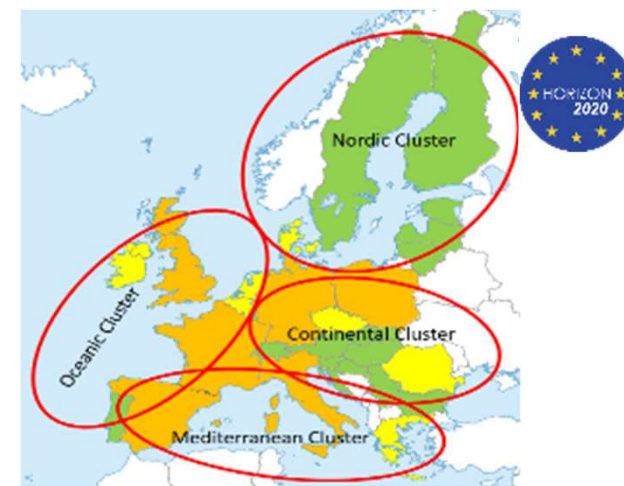
6 countries  
50 partners  
700 farms

**H2020 CLIFNFARMS– 2022/2025**



12 countries  
33 partners  
1 200 farms

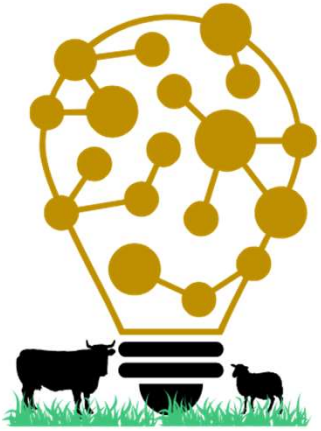
**H2020 Climate Farm Demo – 2022/2029**



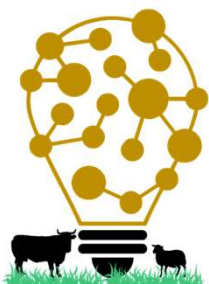
28 countries  
80 partners  
1 500 farms

1 700 French advisers trained for auditing farms  
21 000 farmers involved in a low carbon plan





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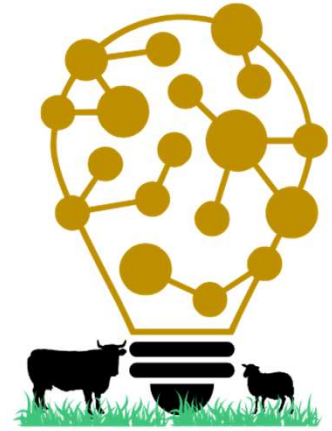


# Plenary session.

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- Q&A





# Supporting technical and environmental improvements on farm

Donal O'Brien<sup>1</sup> and Tom O'Dwyer<sup>2</sup>

<sup>1</sup>Teagasc, Soils and Environment Research Centre, Johnstown Castle, Co. Wexford, Ireland

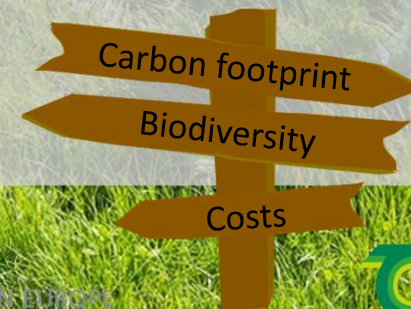
<sup>2</sup>Teagasc, Animal & Grassland Research Centre, Moorepark, Co. Cork, Ireland

NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE



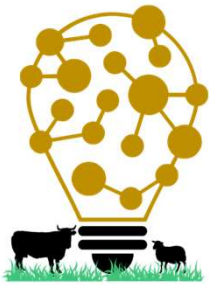
# The Signpost Programme

- Multi-annual campaign to reduce carbon/greenhouse gas (GHG) emissions from Irish agriculture
  - Whole of industry approach led by Teagasc
- Quantify GHG fluxes and carbon stocks at farm-level
- Accelerate uptake of climate actions across farming enterprises - Beef, Dairy, Sheep and Tillage
  - Monitor and verify carbon/GHG savings



NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE





## Our Partners



## Government, State Agencies and Sponsors



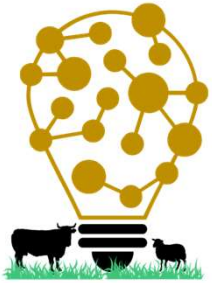
## Supporters



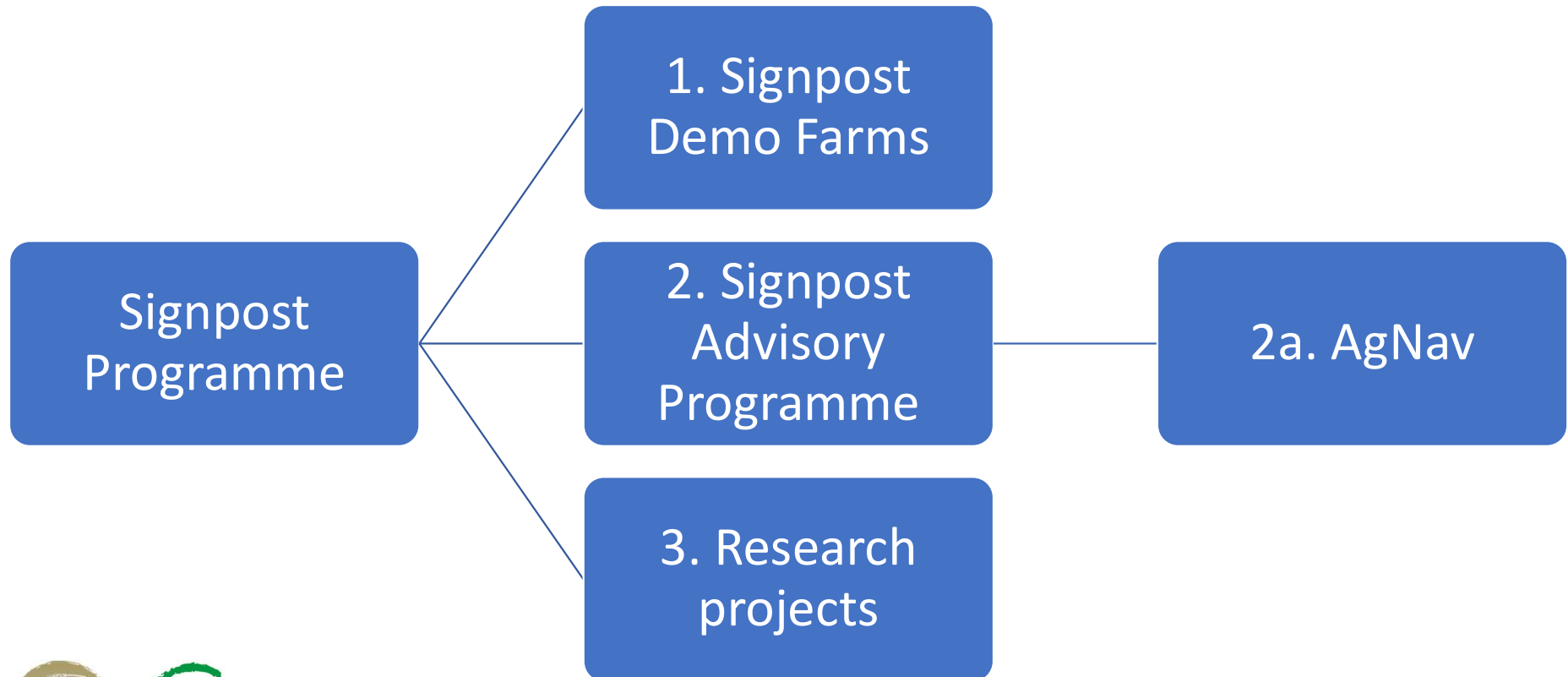
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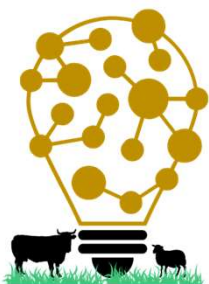


# The Signpost programme



NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE

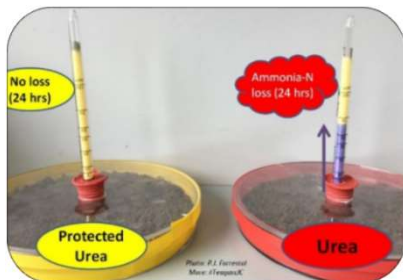




# 1. Signpost Demo Farms



125 Signpost Farmers



Adopt climate mitigation technologies



Share their experiences



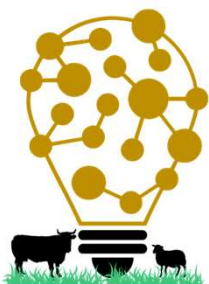
Take part in research projects



Collect data to track progress (NFS)

NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE





## 2. Signpost Advisory programme

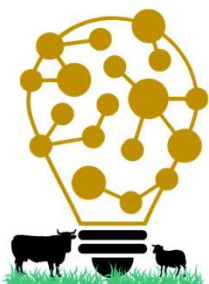


- Launched early 2023
- Team of 21 dedicated advisors
- To guide and support farmers reduce GHG emissions
- AgNav central to delivery
- Tailored Action Plans agreed with farmers



NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE



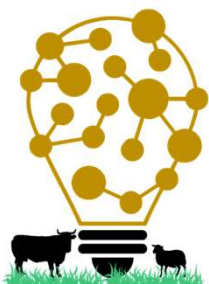


## 2a. AgNav



**Delivers science led, support and planning tools with specific, accurate and verifiable data to farmers to deliver on climate action.**





# 3. Research projects (involving Signpost farmers)



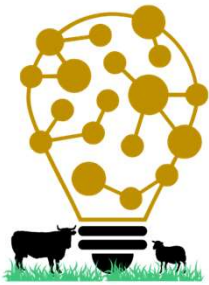
Soil Carbon Project



NASCO

LiDAR



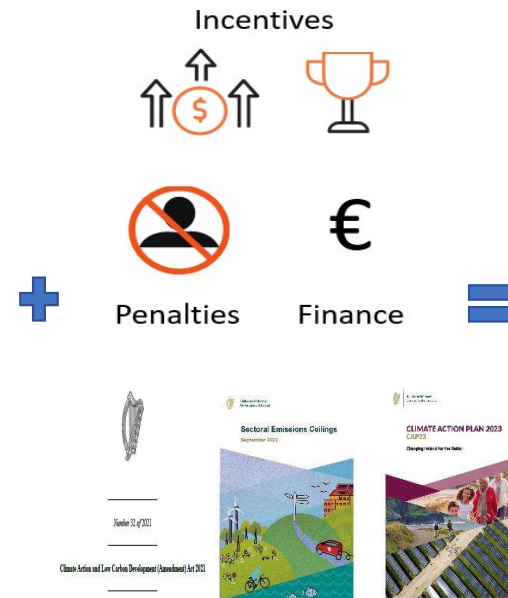


# Successful Change

The Signpost Programme provides “a combination of complementary knowledge transfer activities, science-based, relevant and user-friendly content, and a high level of trust.”

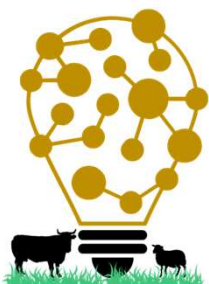


Farm visits	Demonstrations	Farmer discussion groups	Training workshops
Benchmarking	Digital decision support tools	Digital planning tools	Phone calls
WhatsApp group/ text messages	Peer-to-peer learning	Radio/ podcast	Website
Video	Printed materials	Testing/ analysis	Multi-actor partnership



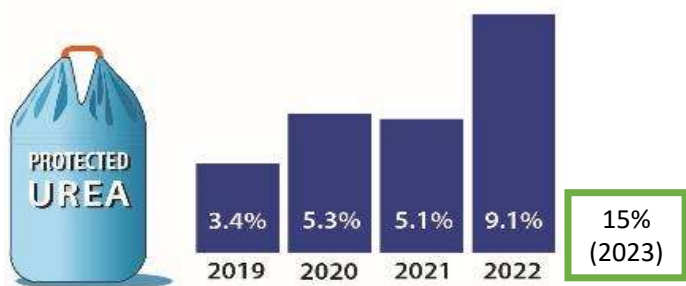
Outcomes and Impact
To increase <b>A</b> wareness of climate solutions.
To build a <b>D</b> esire or personal motivation for climate action.
To enhance farmer <b>K</b> nowledge of relevant changes required.
To enhance the <b>A</b> bility for planning and action.
To enable the farmer to evaluate their actions, and to seek <b>R</b> einforcement
*ADKAR model



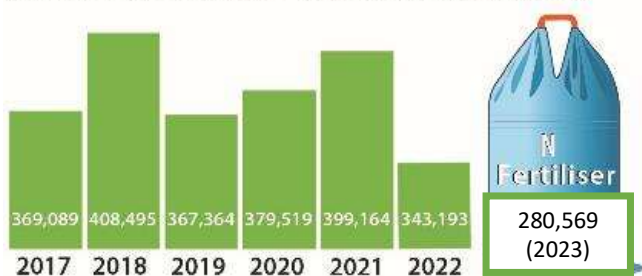


# Progress being made...but more to do

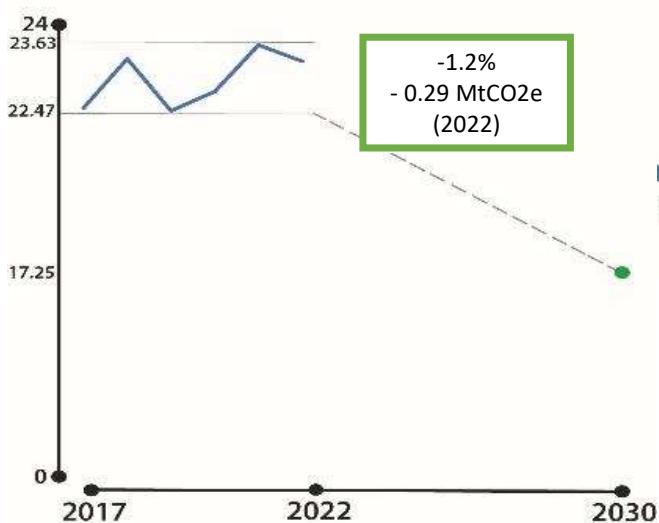
Protected urea sales as % of overall fertiliser N sales (DAFM)



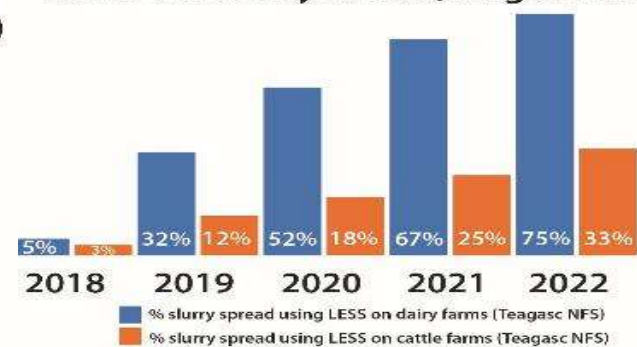
Annual N fertiliser sales (tonnes, CSO)



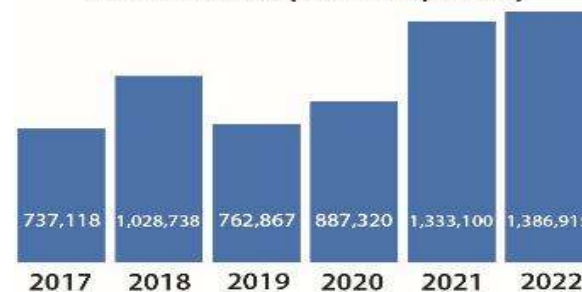
Agricultural GHG emissions (MtCO<sub>2</sub>e, EPA)

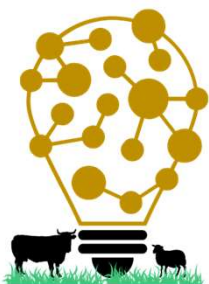


% slurry spread using LESS on Cattle and Dairy farms (Teagasc NFS)



Lime sales (tonnes, CSO)





# Summary



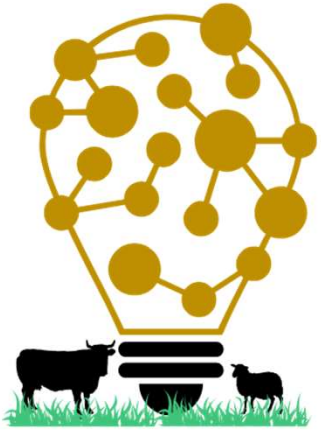
- Teagasc has identified a pathway to achieving our climate targets through technology, efficiency and diversification
- It will be challenging...but a start has been made
- Teagasc, through the Signpost Programme, will play its part
  - a climate advisory and education service to provide tailored advice to farmers
  - an accelerated research programme to provide more technologies
- LIFE and EU partnerships have and continue to have a major role to play



NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE





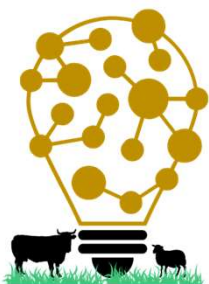


# Thank you for your attention



NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE



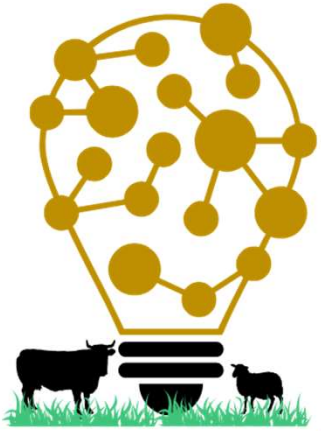


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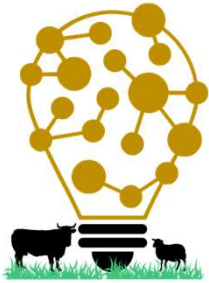


# How does the professional sector support the dissemination of low carbon practices ?

Matilde Moro - ASOPROVAC

NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE

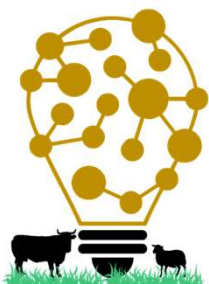




# Spain : How does the professional sector support the dissemination of low carbon practices

- **LIFE BEEF CARBON (2015-2021):**
  - Awareness among livestock farmers;
  - Training;
  - Broad dissemination: social media, TV, radio, open days, magazines;
  - Detection of gaps in knowledge about mitigation techniques
  - Certificate of implementation of good practices “Yo reduzCO<sub>2</sub>”
  - First version of the “Decarbonisation beef strategy” within PROVACUNO



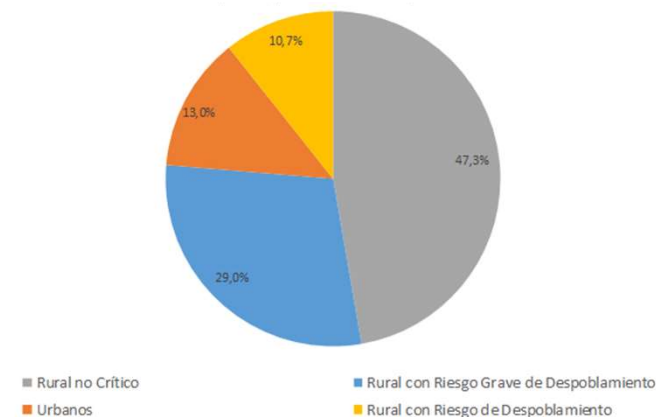


# Spain : How does the professional sector support the dissemination of low carbon practices

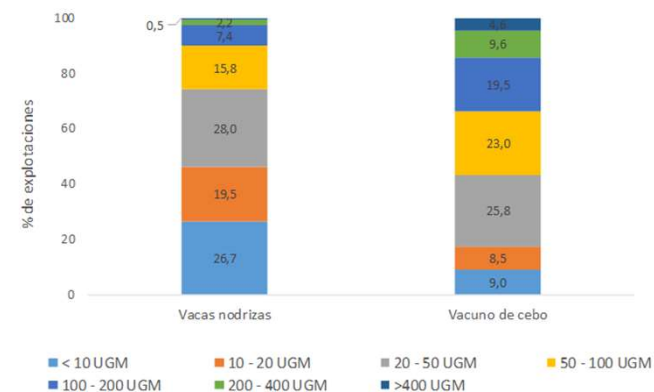
## 2050 CARBON NEUTRAL STRATEGY

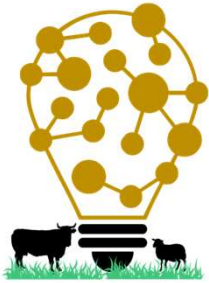


Distribution of farms by type of municipality



Farms size per LU





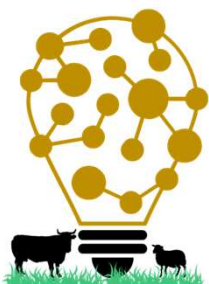
# Spain : How does the professional sector support the dissemination of low carbon practices



PROGRAMA DE FORMACIÓN DE FORMADORES

## 2050 CARBON NEUTRAL STRATEGY





# Spain : How does the professional sector support the dissemination of low carbon practices

## 2050 CARBON NEUTRAL STRATEGY

CODE OF GOOD PRACTICE:  
SLAUGHTERHOUSES AND CUTTING PLANTS

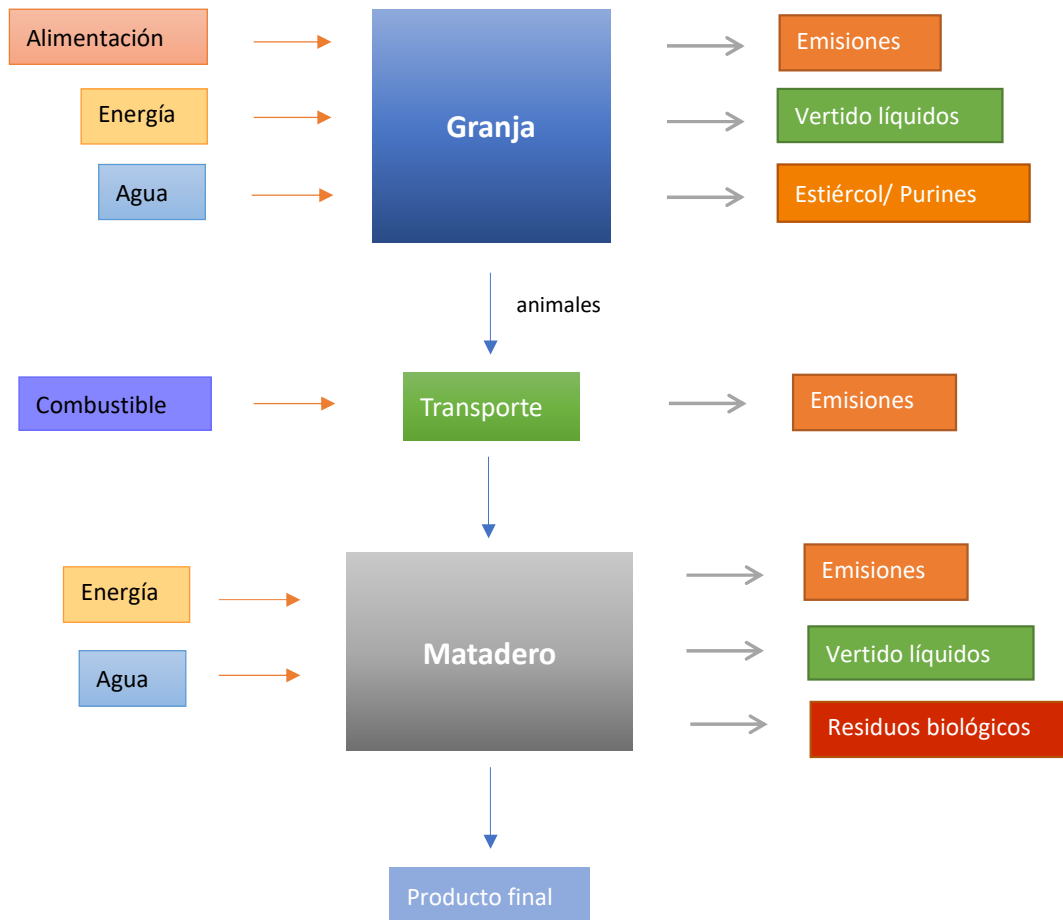
CODE OF GOOD PRACTICE:  
BUTCHERY



# Spain : How does the professional sector support the dissemination of low carbon practices



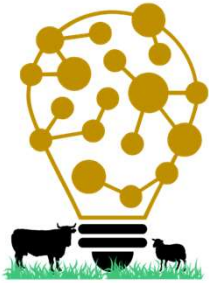
## Life Cycle Analysis for beef in Spain



## Environmental Categories







## Spain : How does the professional sector support the dissemination of low carbon practices



## COMPLEMENTARY ACTIVITIES



Training of trainers



Training of trainers in good practices



Research and Innovation Projects



1. Composting Project:



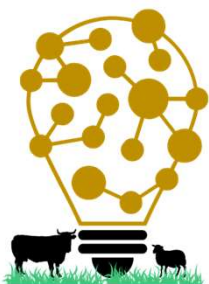
- Generating biofertilizers through agrocomposting from cattle manure



- Design improved, low-cost and feasible on-farm beef manure management protocols.



- Contribute to the reduction of ammonia and GHG emissions.



# Spain : How does the professional sector support the dissemination of low carbon practices?

Mitigation strategies

BOE BOLETÍN OFICIAL DEL ESTADO  
Núm. 312 Jueves 29 de diciembre de 2022

Indicadores

I. DISPOSICIONES GENERALES  
MINISTERIO DE LA PRESIDENCIA,  
RELACIONES CON LAS CORTES Y MEMORIA DEMOCR.

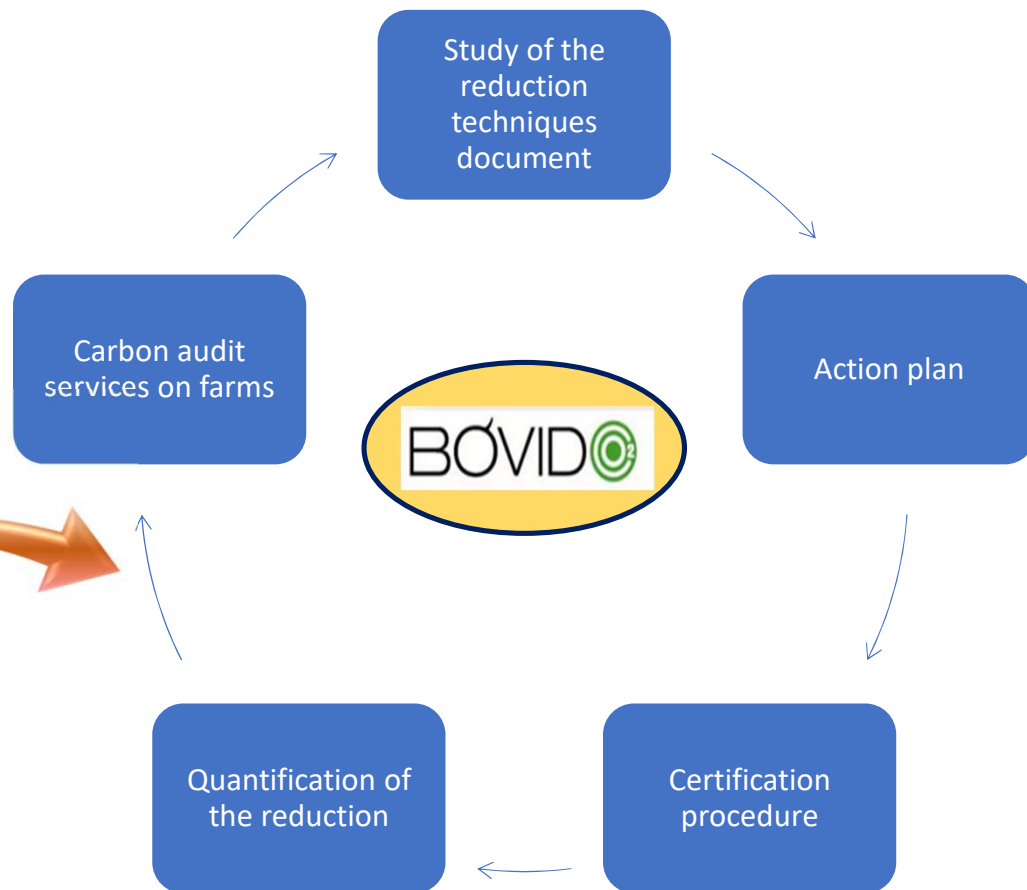
23053 Real Decreto 1053/2022, de 27 de diciembre, por el que se norman básicas de ordenación de las granjas bovinas.

Carbon Agri document

CARBON AGRI  
Méthode de suivi des réductions  
d'émissions en élevages bovins et de  
grandes cultures conforme au Label Bas  
Carbone  
17 juillet 2019



ADAPTATION TO SPANISH CONDITIONS





Linking producers to industry

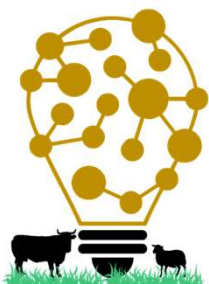




TO CONCLUDE:  
Dissemination,  
dissemination and  
dissemination...

MUCHAS GRACIAS



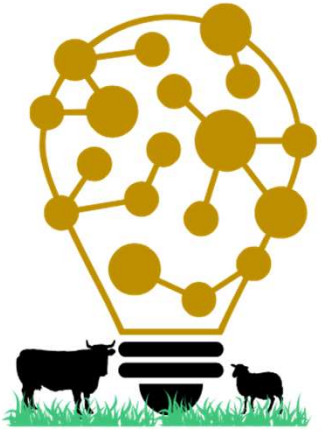


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- Q&A





# “Les deux Pieds sur Terre”

Danone’s project to support French dairy farmers in their Carbon footprint reduction

NETWORKING EVENT: UPSCALING LOW CARBON LIVESTOCK FARMING IN EUROPE

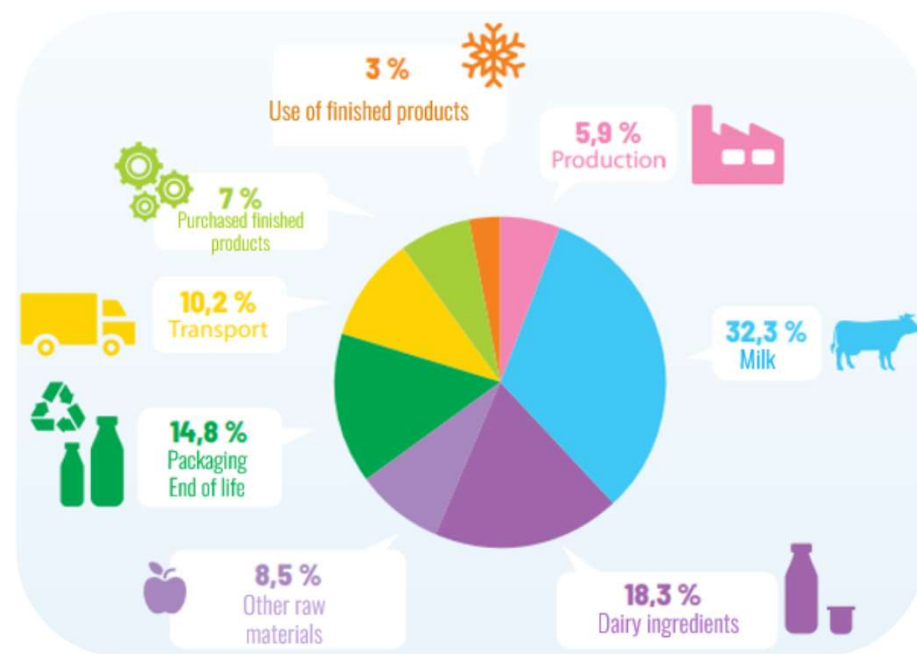




# Danone roadmap to Net-Zero by 2050

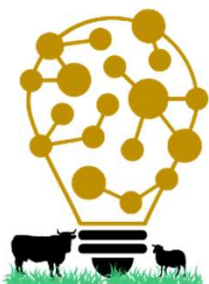
*“Climate change is an unprecedented challenge, with very real impacts on our business and supply chains, and the ecosystems and communities we operate in”*

Our journey toward 2030  
(Mt CO<sub>2</sub>e)



Total Greenhouse gas emissions (2022)





# Les deux pieds sur Terre : an holistic transition

2017 – 2023

1300 Farmers

More than

6M€



Reduce the carbon footprint of dairy farms **by 15% by 2025.**



Improve the technical and economic performance of dairy farms.



Improve soil health



Communicate positively on breeding, its trades, its practices, its territories.



Disseminate best practices to all players in the dairy industry.



**DANONE**

- Awareness & diagnosis



**IDELE & 20 PARTNERS**

- Diagnosis & Technical advices



**DANONE ECOSYSTEM FUND**

- Program funding



**MiiMOSA**

- Setting up projects and crowdfunding







# Onboard 100% of danone's farmers into the project with 4 levels

## 1- MEASUREMENT AND AWARENESS

A first measurement of the carbon footprint & soil health (certified diagnosis CAP '2ER® level 1)

More than 15 Danoner technicians to onboard

CAP'2ER®



## 2 – PERSONALIZED SUPPORT

Personalized technical support that includes a decision-making aid diagnosis (level 2 CAP'2ER® diagnosis) accompanied by a concrete action plan, with a technical and economic visit.

## 3 – FUNDING AND IMPLEMENTATION

Technical and financial support, co-financed by Danone, alongside the general public via the MiiMOSA crowdfunding platform.

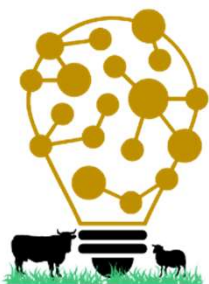
MiiMOSA

## 4 – EXPERIMENTATION AND DISSEMINATION

Collective training

4 collective pilots launched, funded by Danone to innovate and test new practices consistent with the local pedoclimatic context.





# The power of team work

## • Exemple of Low Normandy Pilot :

**Improve soil fertility, increase protein autonomy and reduce the use of phyto sanitary products.**

9 farmers accompanied by the agricultural Chamber for 2019.

- Numerous trials (*Mechanical weed control, Covers adapted to objectives (biomass production or forage production with good feed value or agronomy), no-till farming....*)

- And go beyond trials :

- Organization of collective orders for plant cover crops
- Collective Miimosa project to finance roller designed to destroy cover crops without tilling the soil



### Danone & Technical partners roles :

- Derisking trials
- Technical support & structuration of reflexion
- Analysing datas, provide key éléments to go deeper
- Encourage the new approach
- Co-Finance needed material

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*Project creates social links thanks to collective experimentation*

*Impact Study 2020*

# Miimosa



### Des sols en bonne santé pour du lait de qualité !

Aidez 8 producteurs normands de lait dans leur transition dans des pratiques respectueuses des sols et de la biodiversité.





# Farm demo & group training



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# First results

2016

- **10%**  
carbon emission

In Kg Co2 eq / L of milk

*Dairy interbranch reference 2016*

2022



92 % of partner farms involved in the program



Nearly 40% of Partner Farms have done Carbon action plan



37 collective trainings since 2017



2864 assessments carried out since 2017



85 hA of biodiversity maintained on average per farm



53% of farms with a soil practices assessment



# Key learnings & Next challenges to face in the coming years in order to accelerate



## Farmers at the heart of the program

- Enhance the image of agriculture and restore farmers' pride in their entrepreneurial skills and public-interest role.
- A lot (everything) rely on farmers willingness to improve/change practices

## Program Time frame

- Must be adapted to long-term agricultural time frame

## Collective mobilization

- Agricultural transition is complex and multifactorial : requires a collective approach with all the dairy territory actors
- Farmers collective pilots have lots of positive impacts
- Technical support expertise to farmers is key





# Key learnings & Next challenges to face in the coming years in order to accelerate



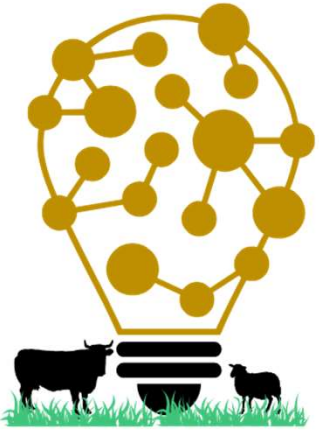
## Financing

- **Make the transition attractive to farmers and private investors** by developing ecosystem payments aimed at encouraging agroecological practices.
- **Cover the risks associated with agro-ecological & low carbon transition**, with the emergence of financial and insurance products to accelerate regenerative practices
- **Support the purchase and/or sharing of equipment and materials needed** to implement new agro-ecological practices.
- **Strengthen the emergence and financing** of multi-actor agro-ecological projects in local areas.

## Consumer valorization

- **Raise consumer awareness** of the many benefits of agroecology for human health and the environment.



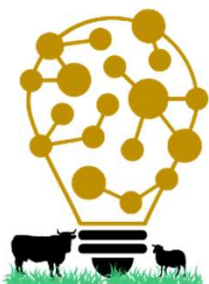


# Thank you for your attention

Clémence Jouan



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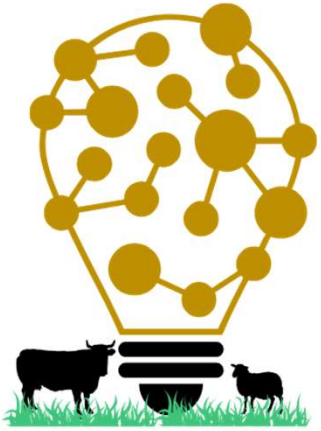
# Plenary session.

Questions on [menti.com](https://www.menti.com)  
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- Introduction– Anaïs L’hôte (LIFE Carbon Farming) & Sindy Throude (LIFE Green Sheep)
- **European Policies on Carbon Farming** Valeria Forlin (DG Clima)
- **France : French initiative for a low carbon strategy** (training, tools, partnerships, financial support) by Idele – Josselin Andurand
- **Ireland : Supporting farms technical and environmental improvements** by Teagasc – Donal O’Brien
- **Spain : How does the professional sector support the dissemination of low carbon practices ?** by Asoprovac – Matilde Moro
- **Involvement of agrifood industries in decarbonizing dairy sector** – Clémence Jouan, Danone
- ➔ **How to reward farmers for supporting change of practices ?** I4CE – Clothilde Tronquet
- Q&A







# How to reward farmers for changing their practices?

Clothilde Tronquet – I4CE

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Who are we?

# Institute for Climate Economics



## I4CE FIGURES



**40**   
Team members

**50**   
Events annually

**~44**   
Publications annually

**~11 500**   
Twitter followers

**8 000 +**   
Newsletter subscribers

**750+**   
Press articles

**16 500 +**   
Linkedin followers

## OUR MISSION

The Institute for Climate Economics is a **non-profit research organisation that provides independent policy analysis on climate change mitigation and adaptation**

Who are we?

# Agriculture and Food Climate Club



- **A network of expertise**
  - private organisations
  - institutions
  - researchers
- **Our mission**
  - Decoding climate issues in the agriculture and forest sectors
  - Mutualising expertise and experience
  - Creating tools to facilitate the climate transition
- **Our work:**
  - Communicating science
  - Public policy analysis
  - Economic tools

## Our founding partners

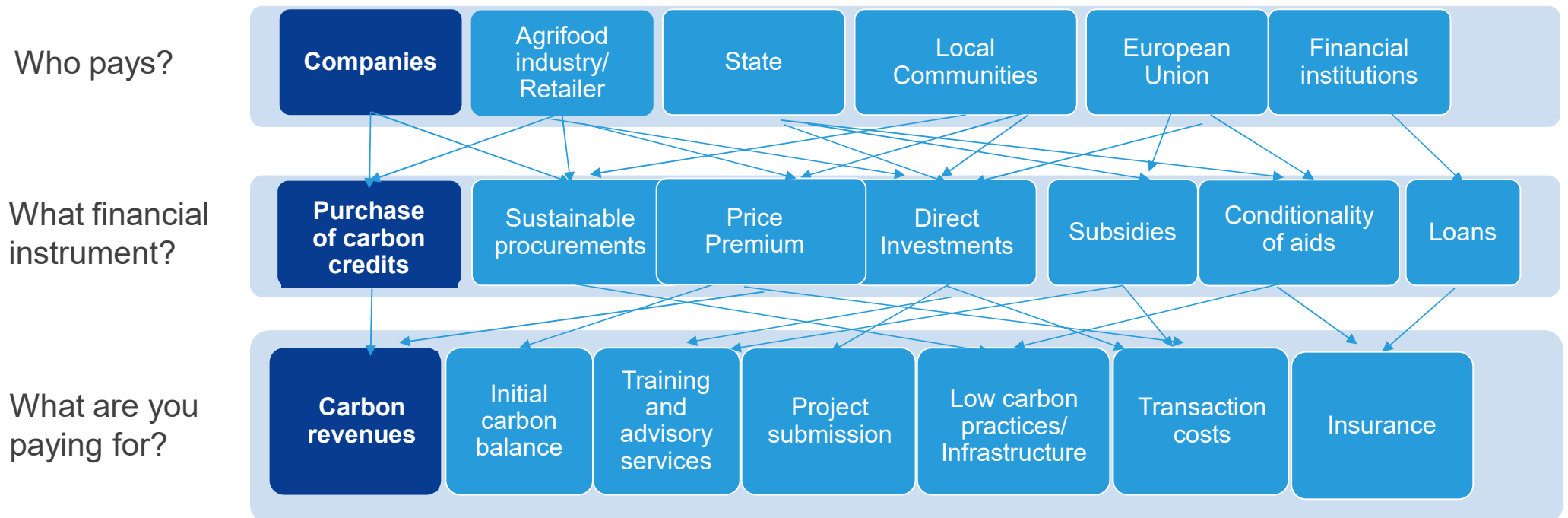


## THE «LOW CARBON LABEL » (LABEL BAS-CARBONE)

- ▶▶ The 'Label bas carbone' is the French voluntary carbon certification standard, supported by the Ministry of Ecological Transition.
- ▶▶ The original idea came from the Climate Clubs

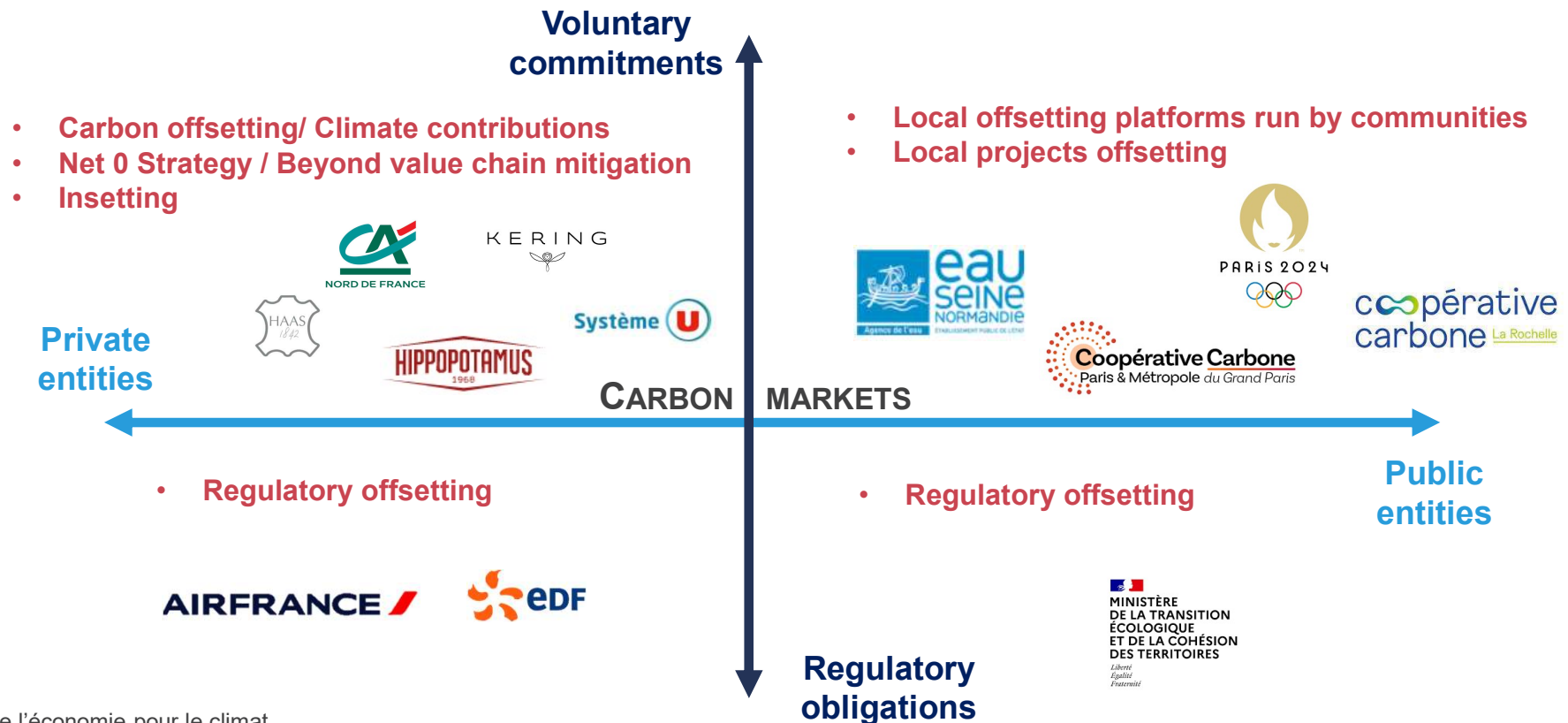
# What are the potential rewarding mechanisms using carbon certification?

- Most mechanisms are based on the **purchase of carbon credits by companies for contribution/offsetting purposes**
- But there are **countless options** to reward certified low carbon practices




# Certified low carbon practices are mostly funded through carbon markets

- **Voluntary commitments by private entities** are the most common source of funding
- **Regulatory uses** are developing



# The limitations of carbon markets

- **Volumes and prices** are low
- **Few agricultural projects**, developing fast and showcasing higher prices than average

Volumes	
International transactions *	~ 279 million tCO <sub>2</sub> eq
International retirements *	~ 156 million tCO <sub>2</sub> eq
Transactions from the Label Bas Carbone ***	 567 000 tCO <sub>2</sub> eq

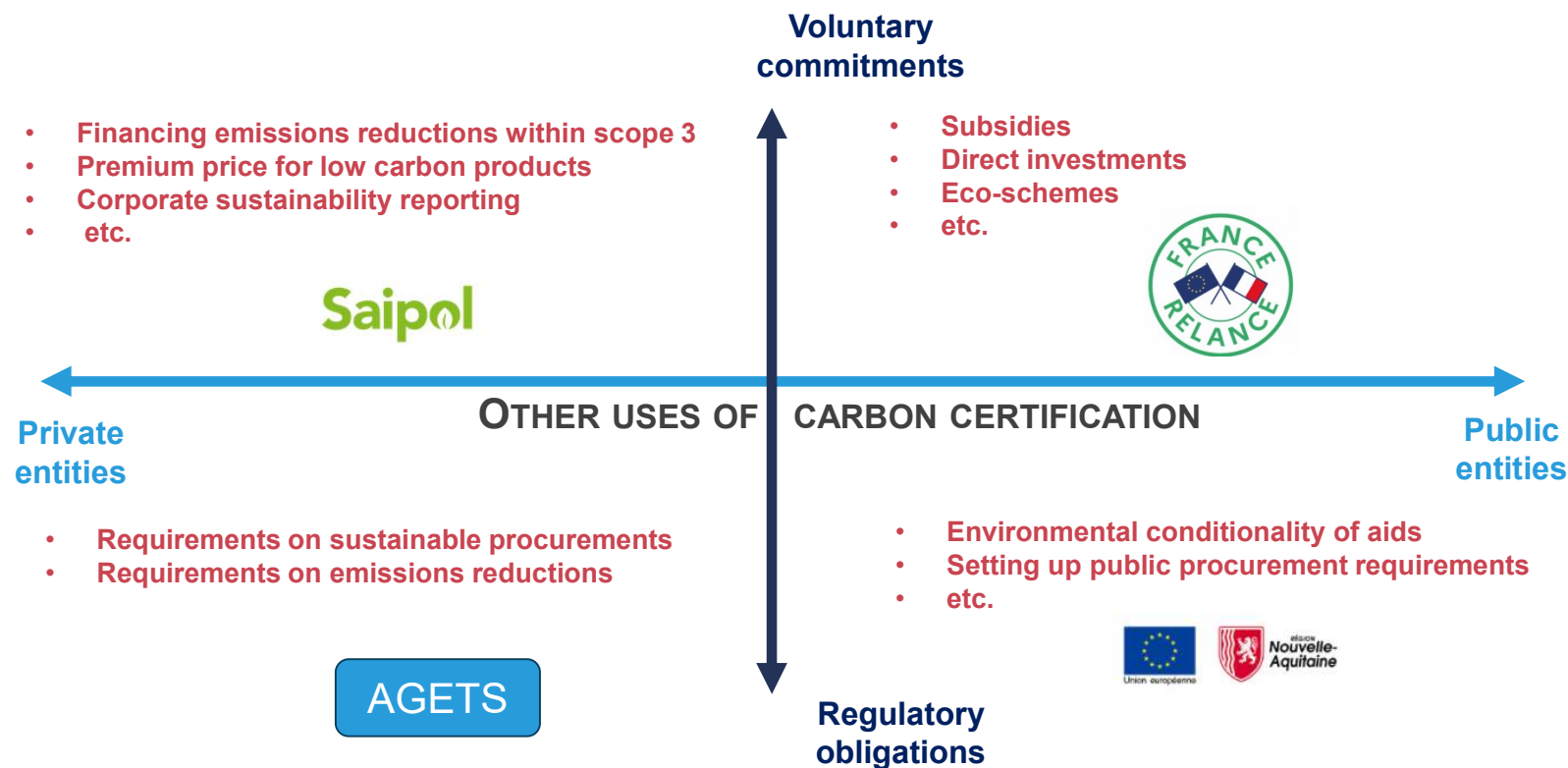
Prices	
Average international price**	~ 7 \$/tCO <sub>2</sub> eq
Average for agricultural projects **	~ 11,2 \$/tCO <sub>2</sub> eq
Average Label Bas Carbone ***	 ~ 34 €/tCO <sub>2</sub> eq

### Data from 2022

- \* Data from Climate Focus, 2023
- \*\* Data from Ecosystem MarketPlace, 2023
- \*\*\* Data from INFOCC 2023

# Other funding opportunities beyond carbon markets

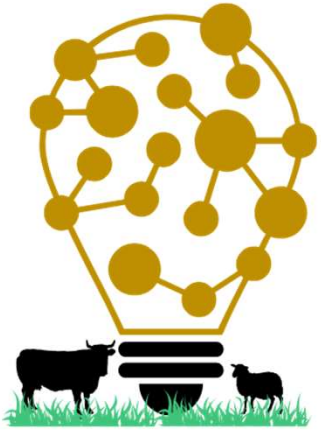
- Alternative mechanisms emerge, based on carbon certification instruments



# Perspectives

- **Carbon markets** are commonly used as a rewarding mechanisms for certified low carbon practices
  - **Demand pull** for certified units
- Other instruments, including **regulatory schemes**, start integrating carbon certification
  - **Regulatory push** for certified climate impacts
- **Mainstreaming carbon certification** in rewarding mechanisms
  - **Facilitate technical and financial aspects**
  - **Coordinate different sources of funding**
  - **Clarify end-uses and claims**



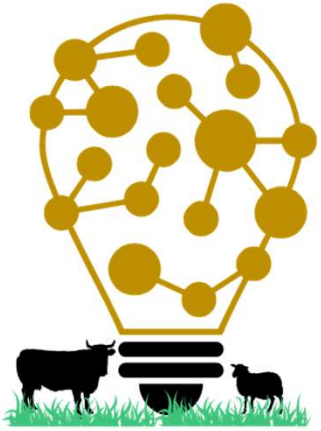


# Merci!

[clothilde.tronquet@i4ce.org](mailto:clothilde.tronquet@i4ce.org)



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# Q&A

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## Do you have any questions for the speakers?

What is the objective of the certification framework?

From RETE APPIA (Italian Network of Pastoralists) :How can stakeholders be involved in the DG Clima workshops to be launched during 2024?

What percentage of the EU's carbon emissions are currently offset by the LULUCF sector?

For Valeria, what policy framework have we to accelerate livestock emission reductions (particularly methane) and reward farmers financially in the years up to 2030? Will the CRCF contribute by 2030?

In your opinion, is a different strategy possible in the evaluation of LCA in continental and alpine bioregions? ( small ruminants, 2nd speaker

@Josselin: its great that you have already 21000 farm assessments. What is your lever/tool to get those farmers to realy implement meassures?

@ Valerie: when a new legislation on co2 allowances for intermediaries is implemented, dies that bot result in pressure on the farmers just the same?

3 speaker: in your opinion or experience which is the best approach to overcome language barrier in stakeholders for dissemination ( sheperds breeders)





## Do you have any questions for the speakers?

What are key practices to go from individual projects to a structural way of working (upscaling)?

@Clemence: if you focus on the co2 footprint...how do you deal with annual rises due to wheater and climate conditions that effect efficienc on the farms?

For Clothilde : are there certification frameworks that are action based, not result based?

For all: could we make a link between low carbon practices certification and experiments like social security for food?

For Valeria: regarding the buy emissions allowance,there will be a default factor as a reference and farmers might need to pay also if they exceed it, & being rewarded otherwise. Could you explain it?



# WORKSHOPS (1h15)

- **#1 PARTNERSHIPS** How to build strong partnerships at the beginning of the project to involve farmers and advisors? *Facilitated by Christine Berger and Josselin Andurand*
- **#2 SKILLS AND METHODS** What skills and methods are needed to support dissemination of low carbon & sustainable practices ? *Facilitated by Caroline Evrat-Georgel and Delphine Neumeister*
- **#3 STAKEHOLDERS** How to involve stakeholders, sectors' bodies and institutions in upscaling low carbon & sustainable practices ? *Facilitated by Christèle Couzy and Sindy Throude (IDELE)*
- **#4 REWARDS** How can farmers be rewarded for implementing these new practices on their farm ? *Facilitated by Clothilde Tronquet (i4CE) and Anaïs L'Hôte*
- **#5 CAPITALIZATION** How can we capitalize the knowledge from European low carbon farming initiatives for research, advice and new projects ? *Facilitated by Laurène Lebelt (EIT-Climate Kik)*

CATTIER

ROOM A

CATTIER

FRANCQUI

ROOM A