Partnerships for dairy and beef low carbon initiatives in France

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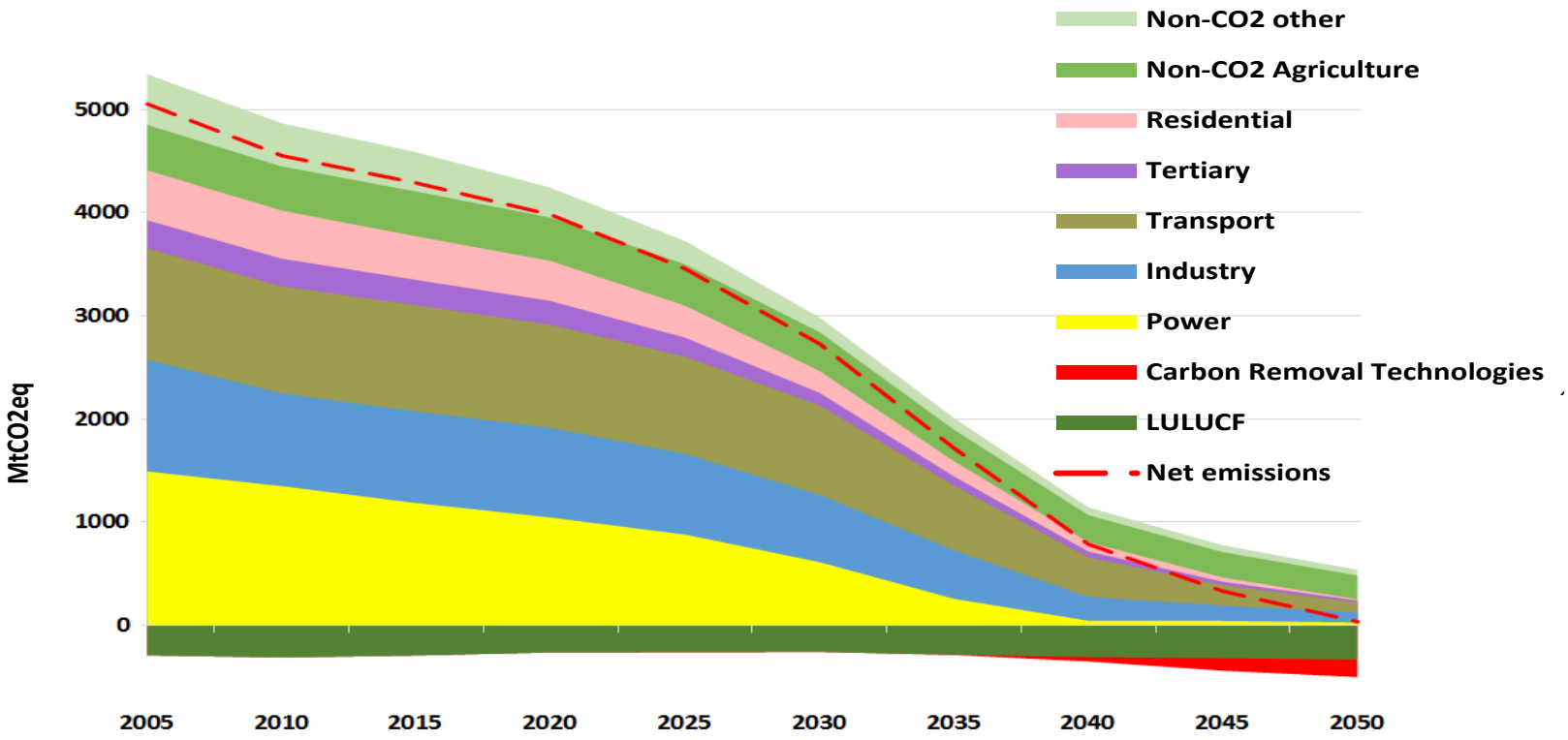
Vision for a Clean Planet by 2050

There are a number of pathways for achieving a climate neutral EU, challenging but feasible from a technological, economic, environmental and social perspectives.



2030 EU Climate and Energy Framework

-40 % Greenhouse Gas Emissions cf. 1990

ETS

Emission Trading System

-43 %

cf. 2005

Including: Power/Energy Sector and Industry, Aviation

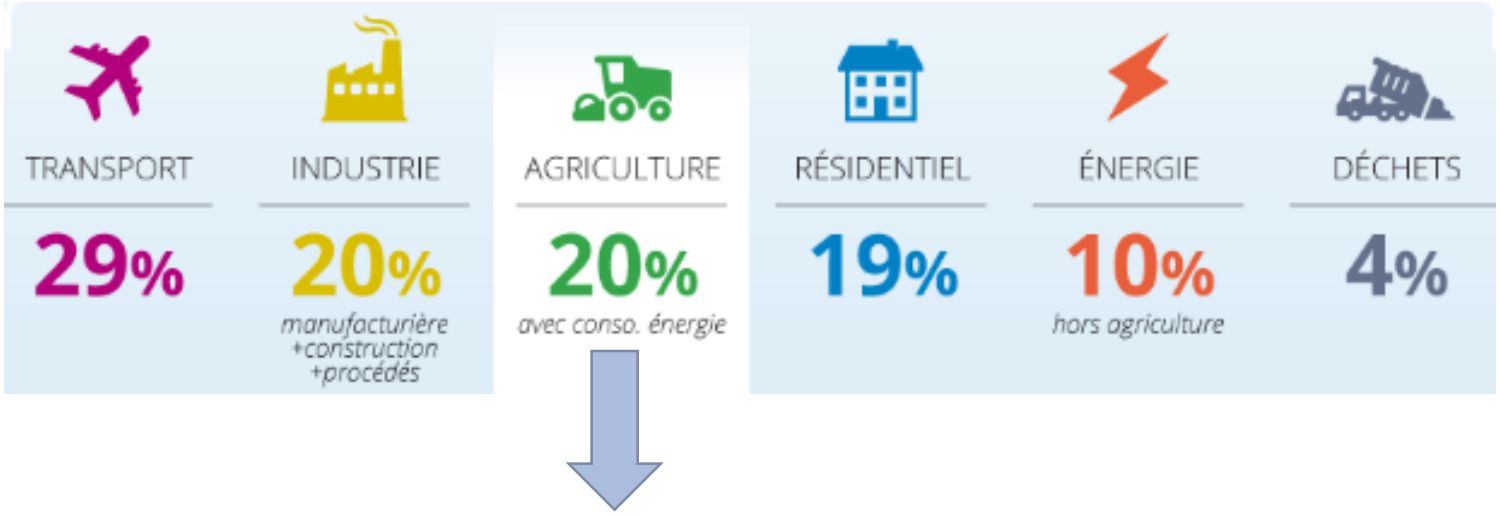
Non-ETS

-30% cf. 2005

Including: road transport, buildings, waste, agriculture, LULUCF

National Energy and climate Plan

GHG emissions in France

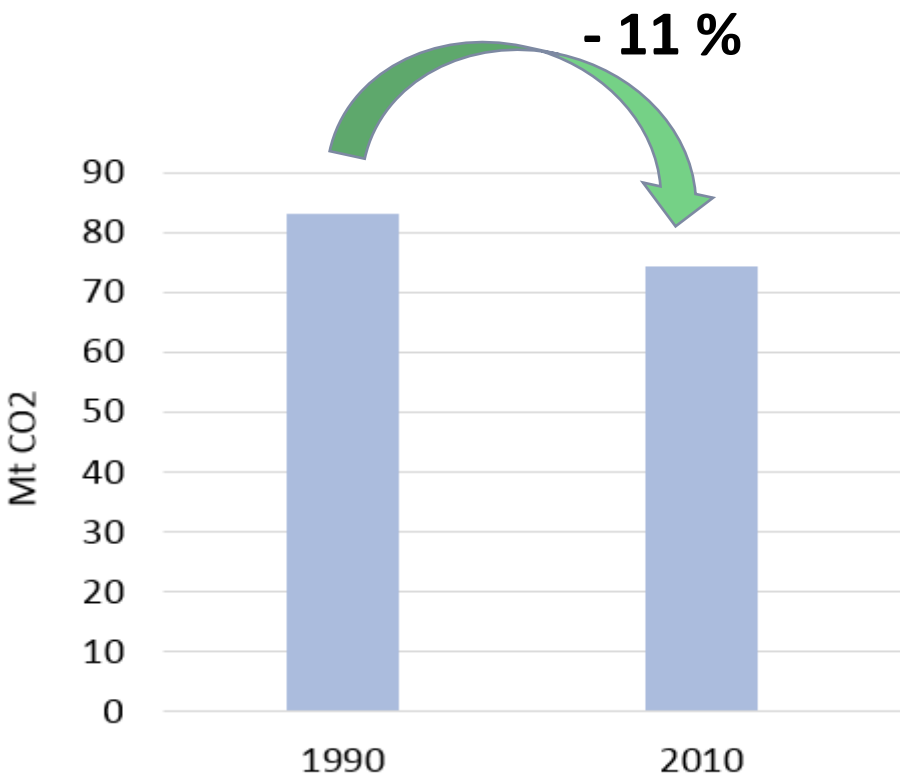


Cattle : 10,4 % of national GHG emissions

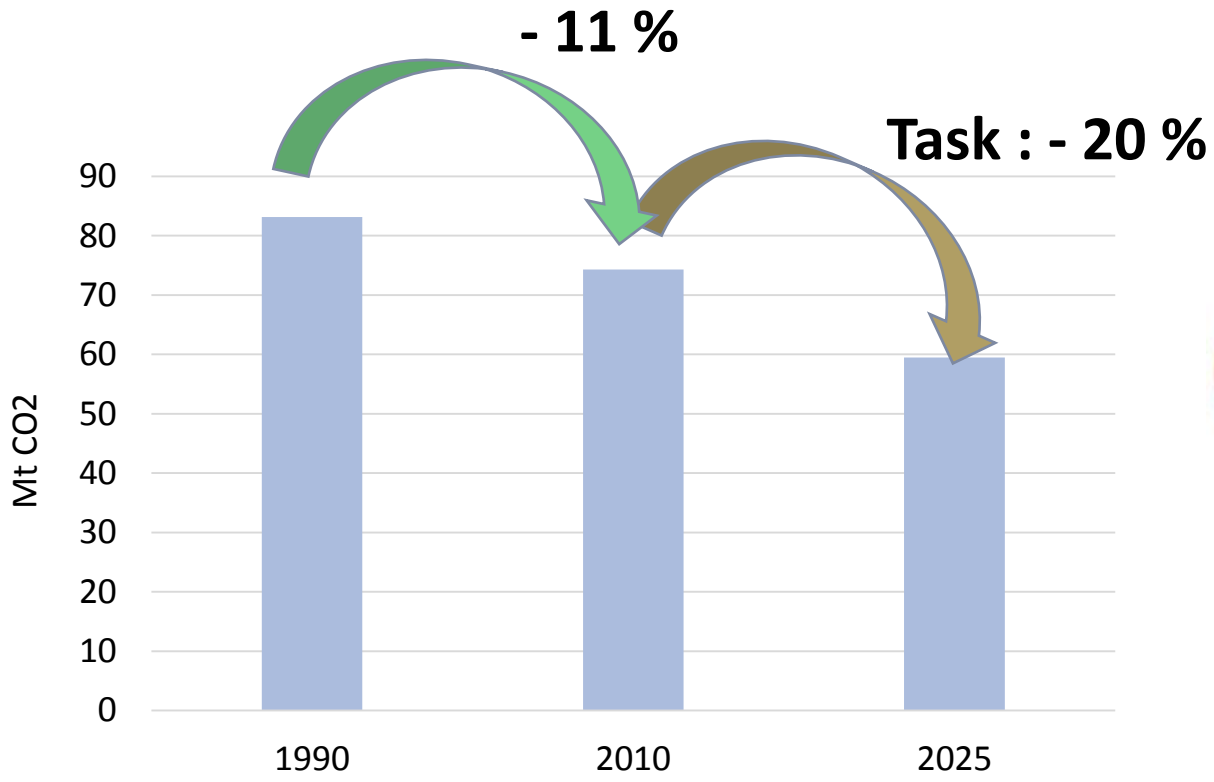
20 Millions of cattle

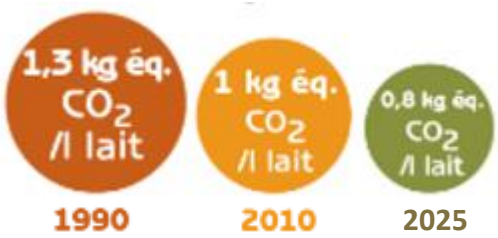
120,000 cattle farmers

GHG emissions from cattle herd in France



GHG emissions from cattle herd in France





Initiatives to reduce carbon intensity in cattle production systems

A commitment to reduce by 20 % the milk and beef carbon footprint

❑ LOW CARBON DAIRY FARM

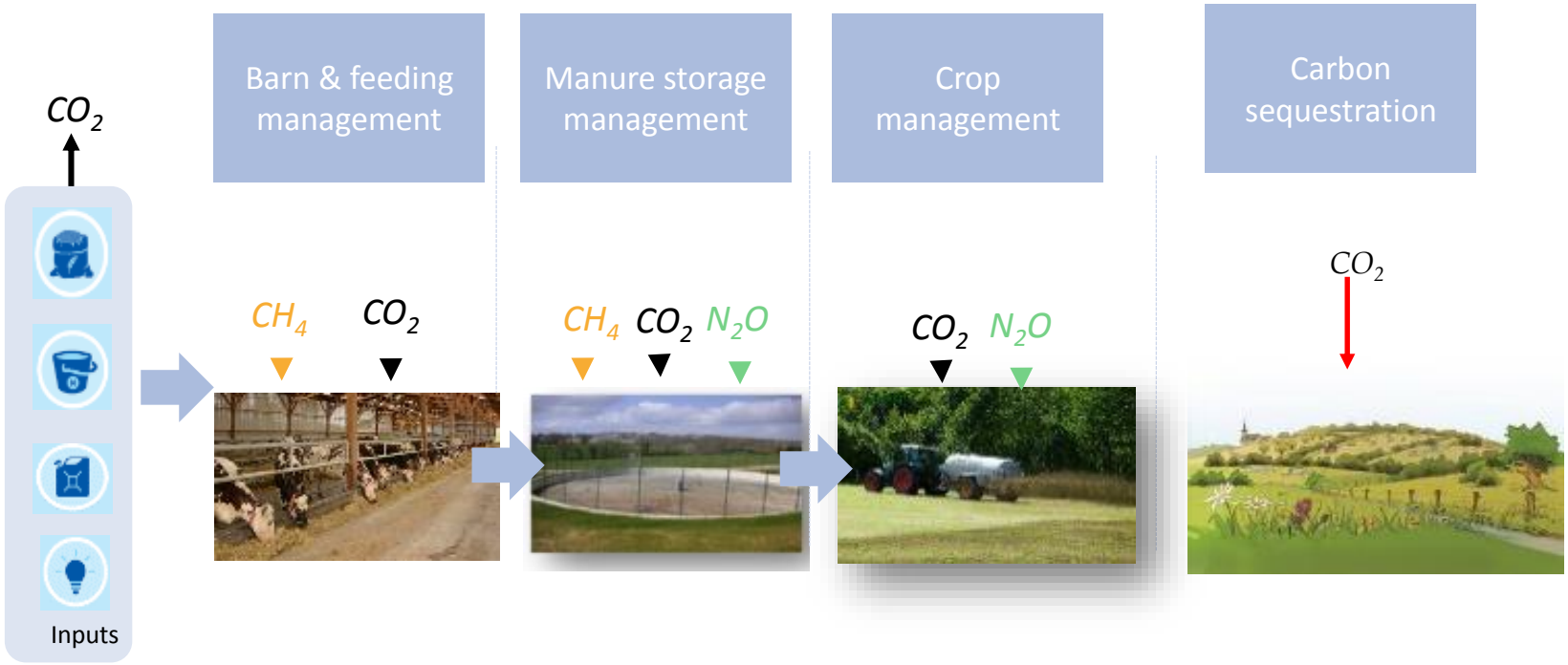
LA FERME LAITIÈRE «BAS CARBONE»

❑ BEEF CARBON

Beef Carbon

A national tool for a whole farm assessment

CAP'2ER®



CAP'2ER is following IPCC methodology

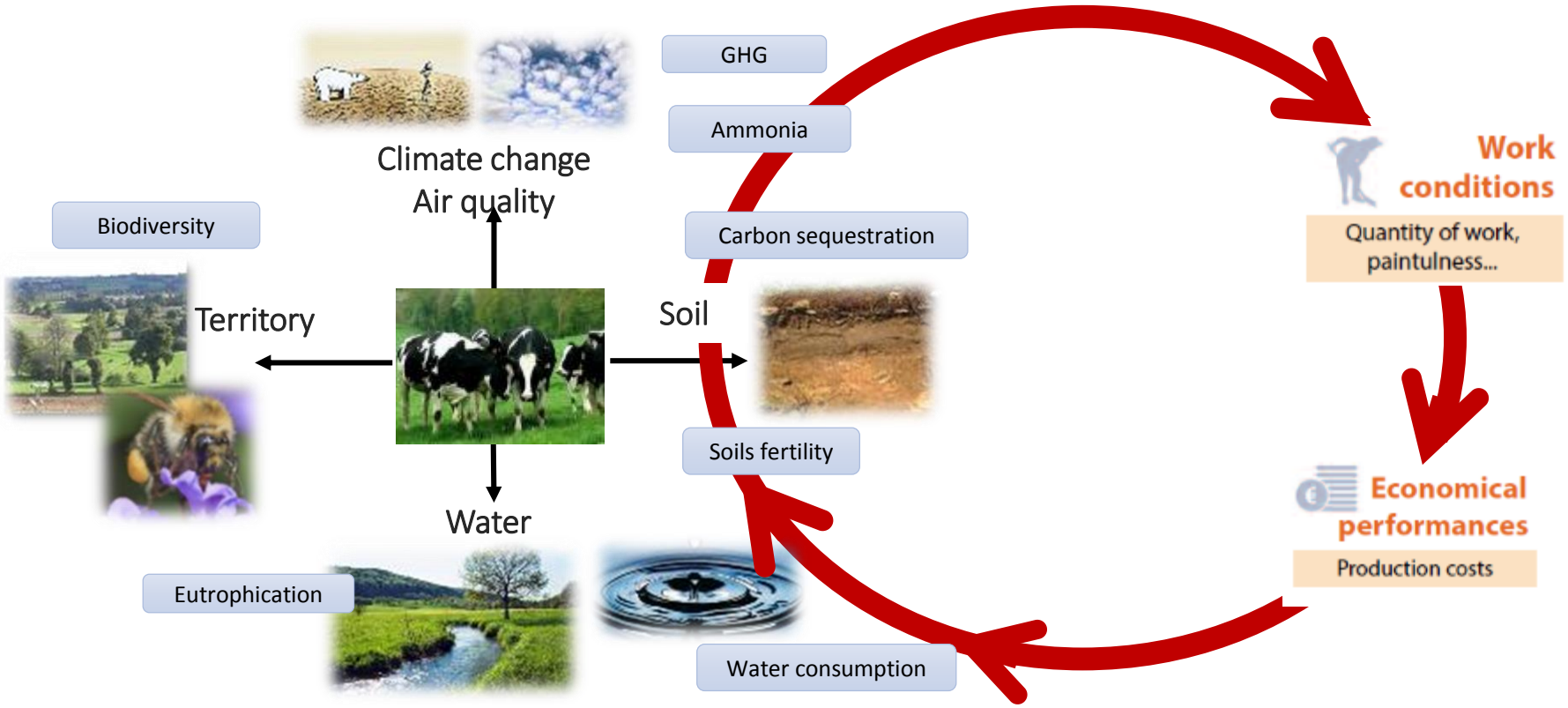
	Sources	Methodology
Methane	Enteric fermentation	IPCC 2006 – Tiers 3 Sauvant et al, 2014
	Manure	IPCC 2006 – Tiers 2
Nitrous oxyde	Manure management, mineral fertilizers	IPCC 2006 – Tiers 1 and 2
Carbon dioxyde	Energy consumption	French data base
	Inputs	EcoInvent, Ecoalim, 2016

- **CAP'2ER in accordance with**
  - LEAP (FAO) guidelines
  - IDF guidelines

- **CAP'2ER certified by**

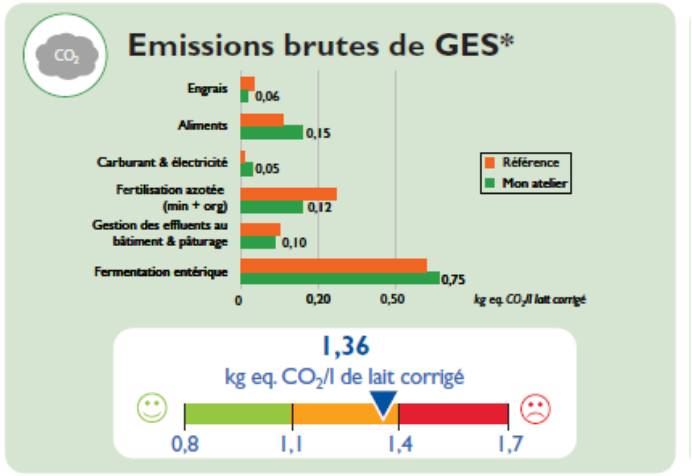
ENVIRONNEMENT ECOCERT

From GHG accounting to the SDGs



Two levels of assessment in CAP'2ER

- **CAP'2ER Level 1**
  - A simplified analysis
  - 29 activity data / 1 hour to collect data and to present results to farmers
  - To develop an observatory
  - To highlight the link between practices and environment



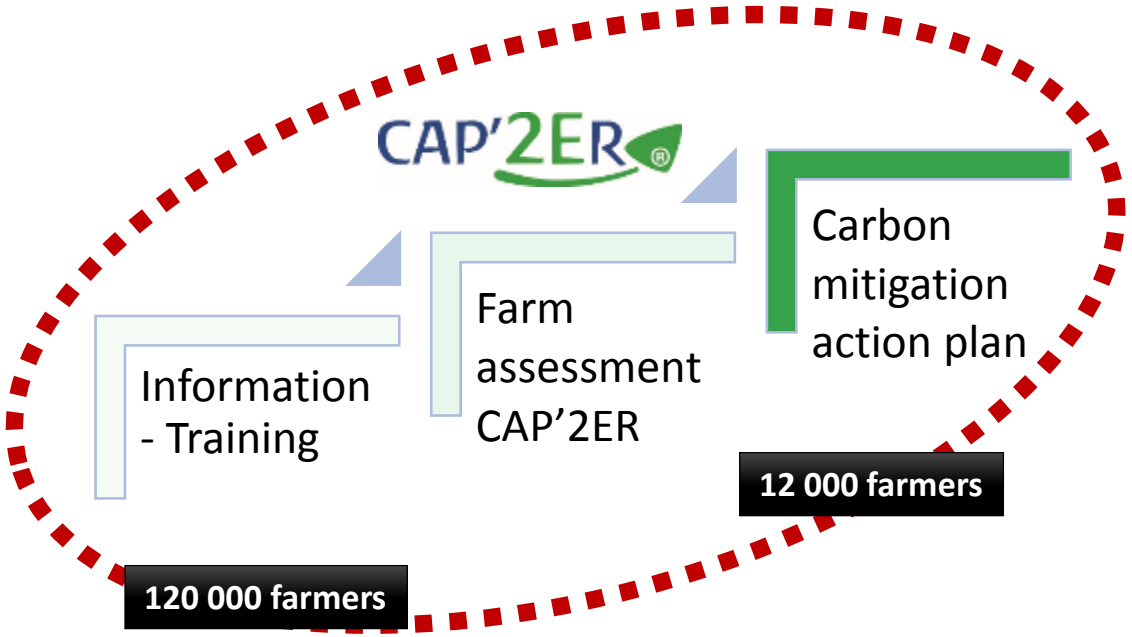
- **CAP'2ER Level 2**
  - A Complete analysis
  - 150 activity data / half day to collect data and to present results to farmers
  - To simulate mitigation practices
  - To build individual carbon action plans

→ **National data base**

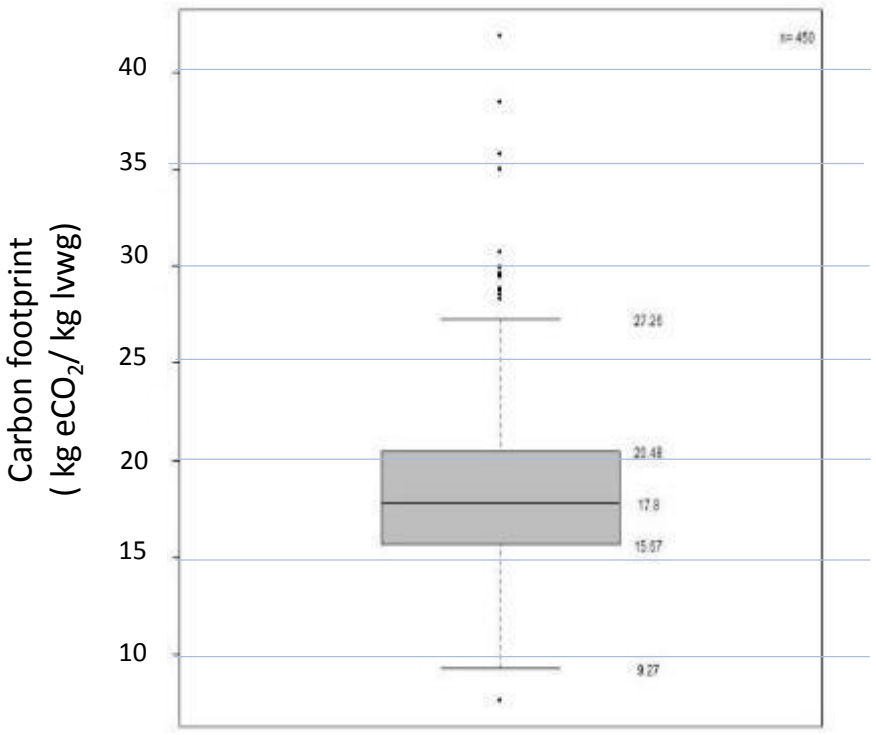

CAP'2ER®
Steering committee

Involving farmers in a national carbon action plan

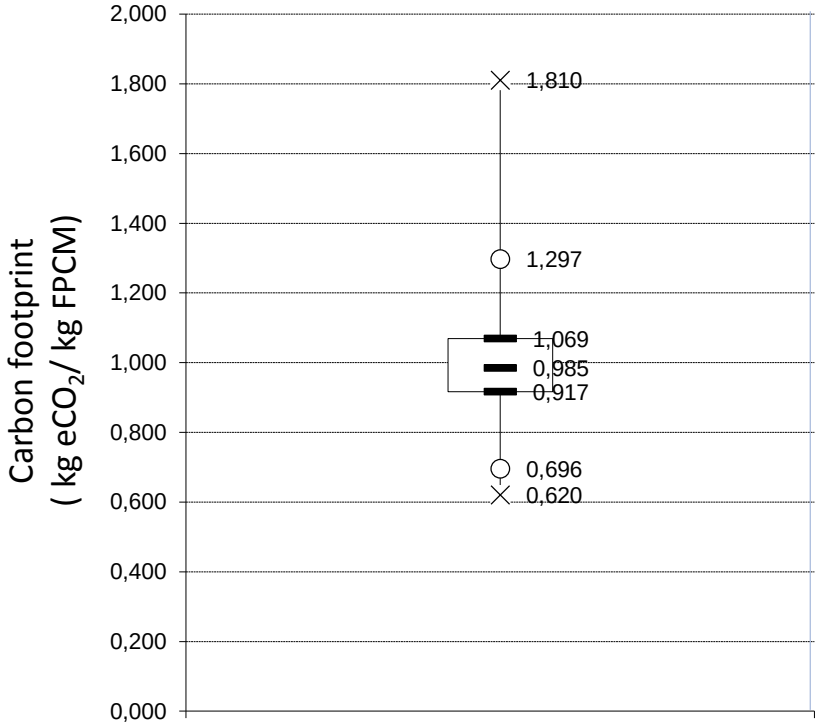
- **Several steps for involving cattle farmers**



Milk and beef carbon footprint
Huge differences between farms



BEEF
Suckler to weanling systems



DAIRY
All systems

Cost effective mitigation levers

10-15%

Herd and manure management

- Heifers and replacement rate
- Herd health and milk yield
- Better use of manure
- Genetic improvement

2-4%

Feed

- Forage quality
- Concentrates
- Protein autonomy
- Pasture
- Legumes

2-8%

Carbon sequestration

Temporary pasture duration
Permanent pasture management

3-4%

Crops management

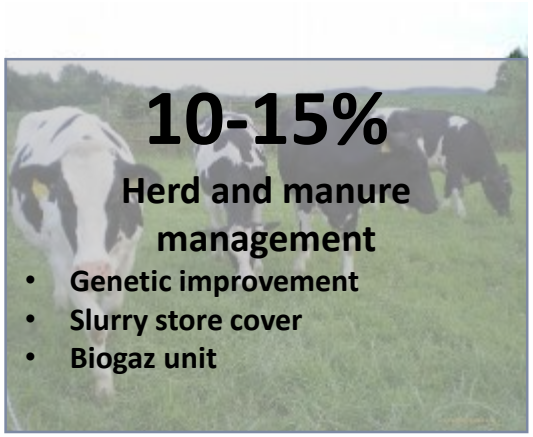
- Forage yield
- Fertilization
- Legumes

1-2%

Energy consumption

- Fuel
- Electricity

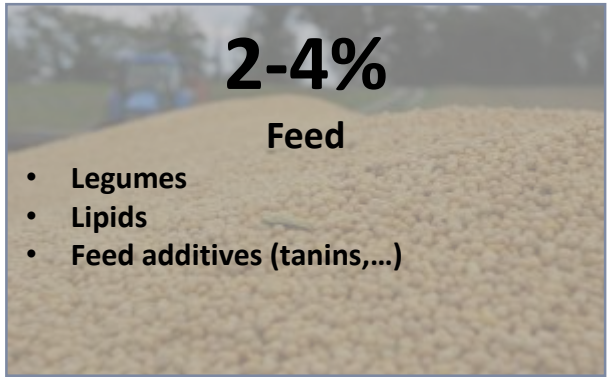
Mitigation measures with extra costs



10-15%

Herd and manure management

- Genetic improvement
- Slurry store cover
- Biogaz unit



2-4%

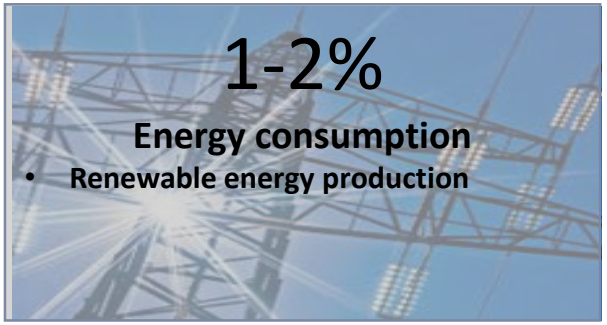
Feed

- Legumes
- Lipids
- Feed additives (tanins,…)

3-4%

Crops management

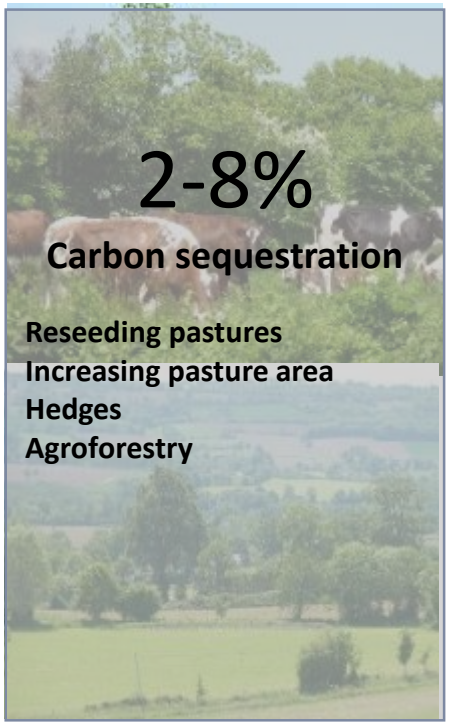
- Inter crops
- Legumes



1-2%

Energy consumption

- Renewable energy production



2-8%

Carbon sequestration

Reseeding pastures
Increasing pasture area
Hedges
Agroforestry

Three main barriers to adopting widely low carbon practices

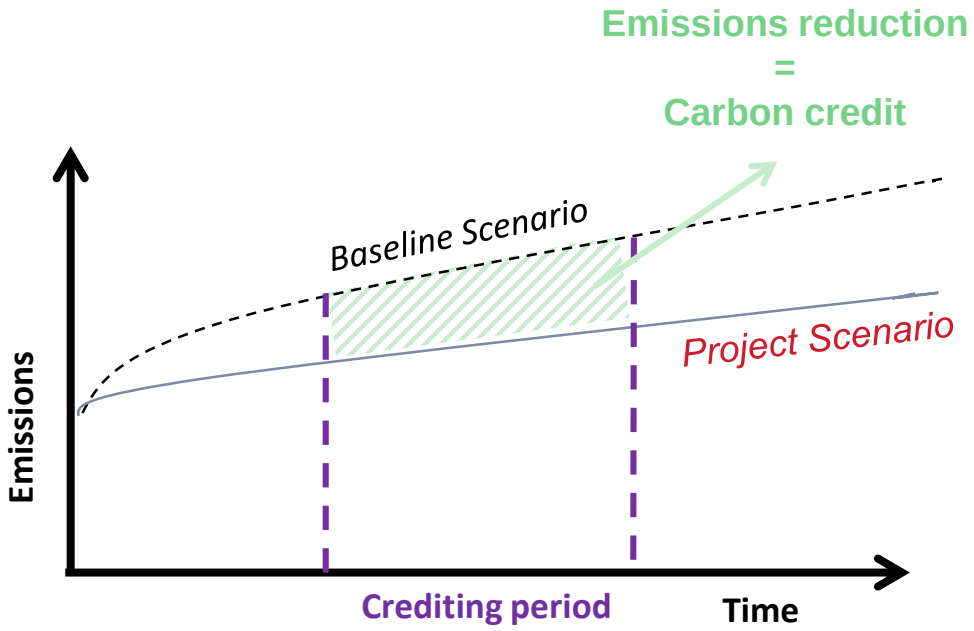
- **Barrier 1** : The brakes on change in farms facing uncertain yield benefit, the risk in applying new practices, the implementation costs,
- **Barrier 2** :The lack of approved carbon accounting methodologies and monitoring tools to certify carbon reductions,
- **Barrier 3** : The lack of awareness on the financial support of low carbon strategies.

From 2012 to 2019, solutions put into practice

- ***Training sessions for farmers and advisers***
- ***A network of innovative farmers***
- ***Communication tools (conferences, farm open days, press,…)***
- ***Agreements between partners***

- ***Recently we developed***
  - ***A carbon certification methodology – CARBON AGRI***
  - ***Application of the carbon finance***

CARBON AGRI : a French methodology to certify GHG reductions in agriculture



Certification process →

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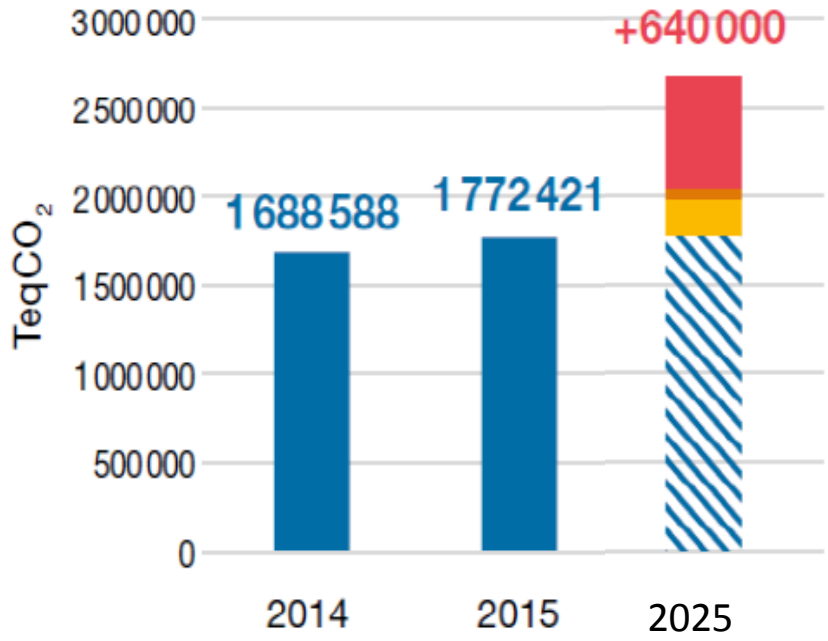
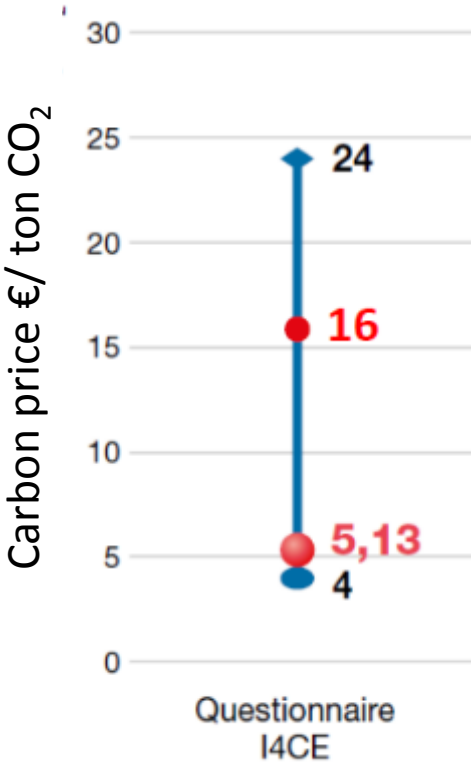
RÉPUBLIQUE FRANÇAISE

Voluntary carbon market in France

Carbon demand : 1,7 Mtons

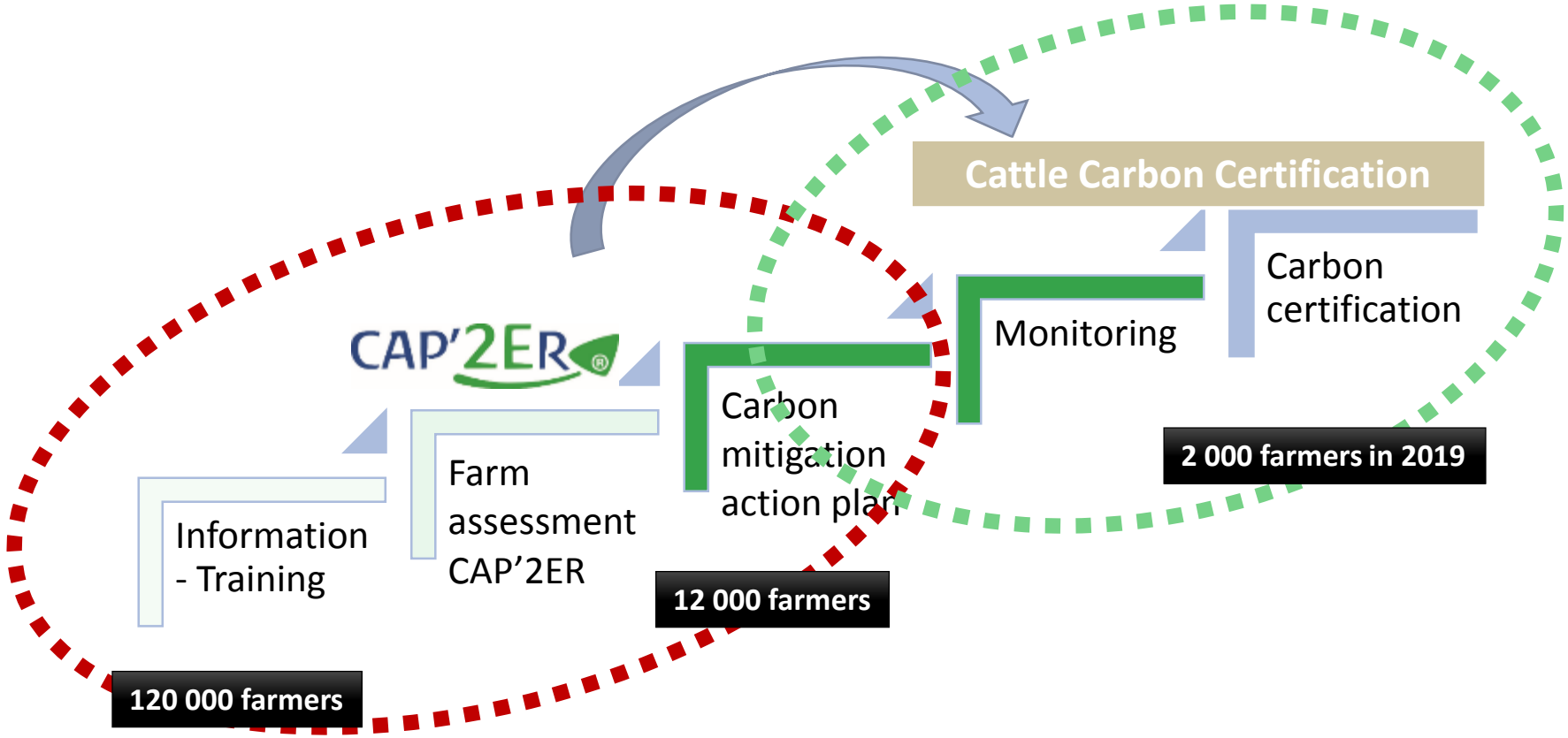


Average price 16 €/t



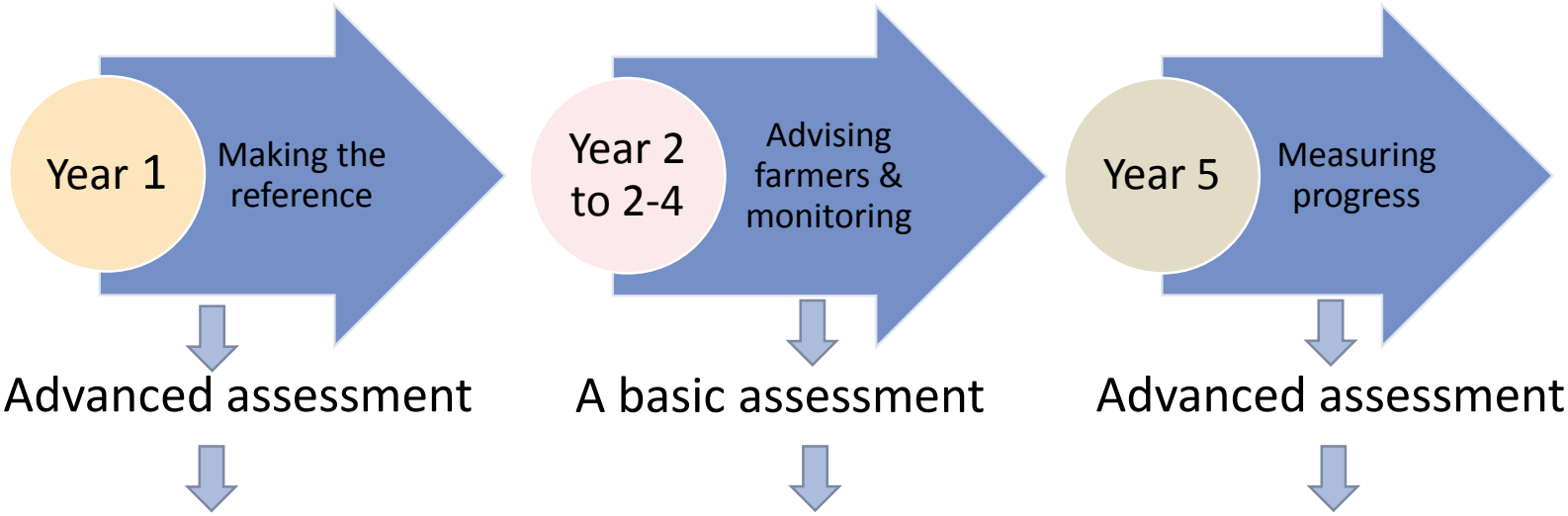
Involving farmers in a national carbon certification

- **Several steps for involving cattle farmers**



Monitoring the progress

This protocol provides flexibility for the user by introducing Basic and Advanced approaches to GHG emission quantification for specific sources.



Example of a low carbon action plan in an average dairy farm

Reducing quantity of concentrates

Reducing age at first calving

Biogaz production

Planting hedges

GHG reductions and Carbon sequestration

Reduction of carbon intensity : 14 %

After 5 years project :
From 350 to 400 tons of carbon

Creation of France CARBON AGRI Association

France
CARBON AGRI
Association

Project developers

Project management
Farmers recruitment
National coordination

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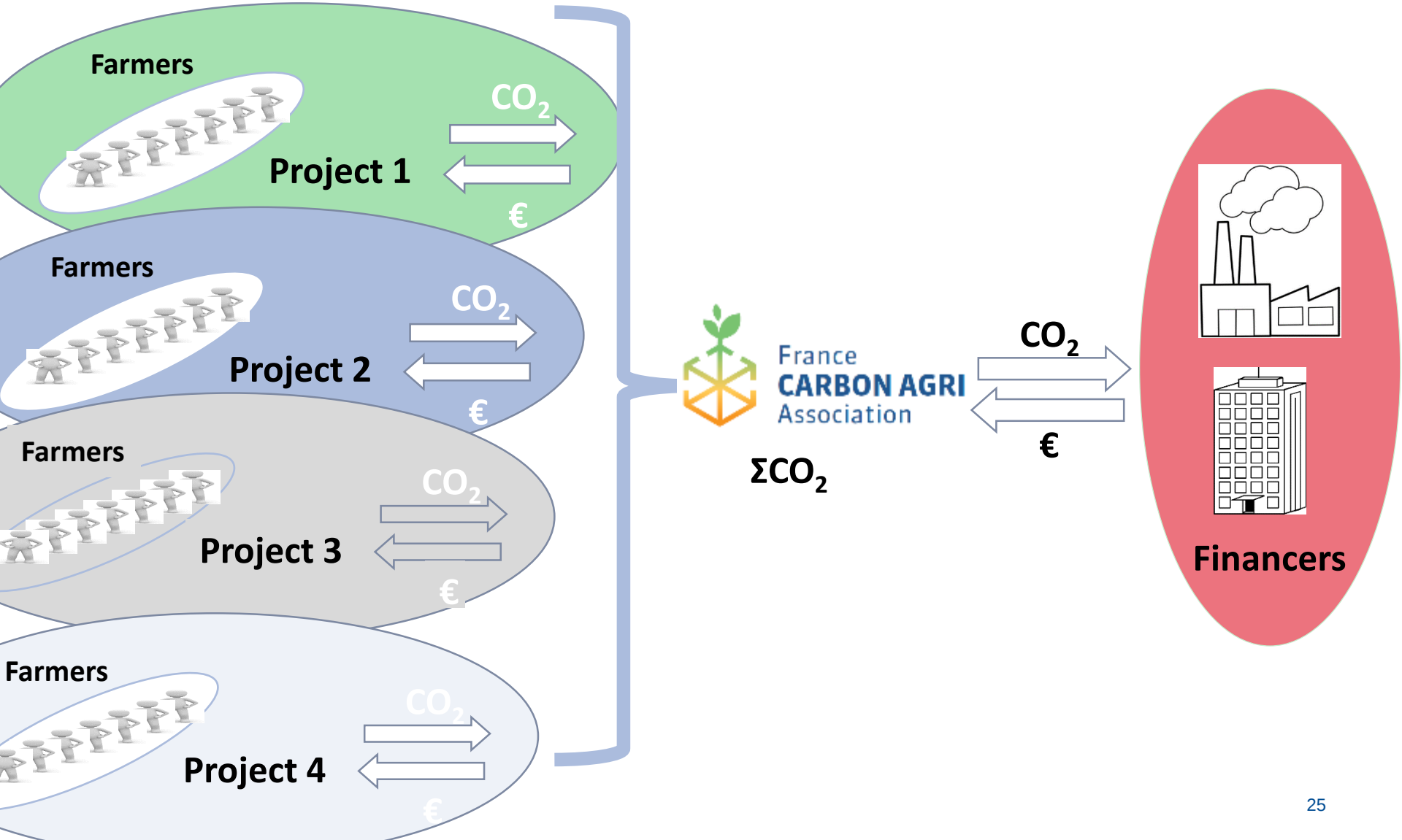
RÉPUBLIQUE FRANÇAISE
Ministère de l'écologie, du Développement durable et de l'Énergie

Project validation

Financers

Development of projects



Summary – Toward a low carbon and sustainable cattle production

- **Reducing carbon intensity is possible by**
  - **Doing the link between GHG, practices and economy**
  - **Training farmers and advisers**
  - **Increasing efficiency**
  - **Catching finance carbon for farmers**
- **Successful dissemination is based on**
  - **Common tools**
  - **Farm scale analysis**
  - **Large partnership from national to regional levels**
  - **Collective carbon certification projects**
- **A proactive and positive strategy leaded by the dairy&beef sectors to reduce carbon footprint and increase sustainability**

Thanks for you attention

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Paris