



# MINISTÈRE DE L'AGRICULTURE ET DE LA SOUVERAINETÉ ALIMENTAIRE

*Liberté  
Égalité  
Fraternité*

## Implementing carbon farming and carbon credits in France

Head of climate change and biodiversity Unit  
Policy officer  
French ministry of agriculture

# **1. Supporting climate-friendly agricultural production systems : carbon farming**

**1.1 The French low carbon strategy**

**1.2 Carbon farming as an opportunity for farmers**

# **2. The French “low carbon label” and its application in agriculture : an example of a carbon credit scheme**

**2.1 Functioning of the label**

**2.2 Example of a livestock project**

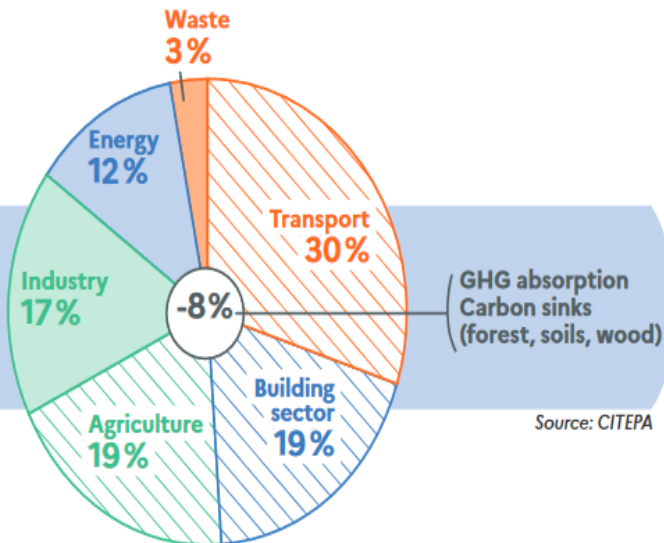
# 1. Supporting climate-friendly agricultural production systems : carbon farming

## 1.1 The French Low Carbon Strategy

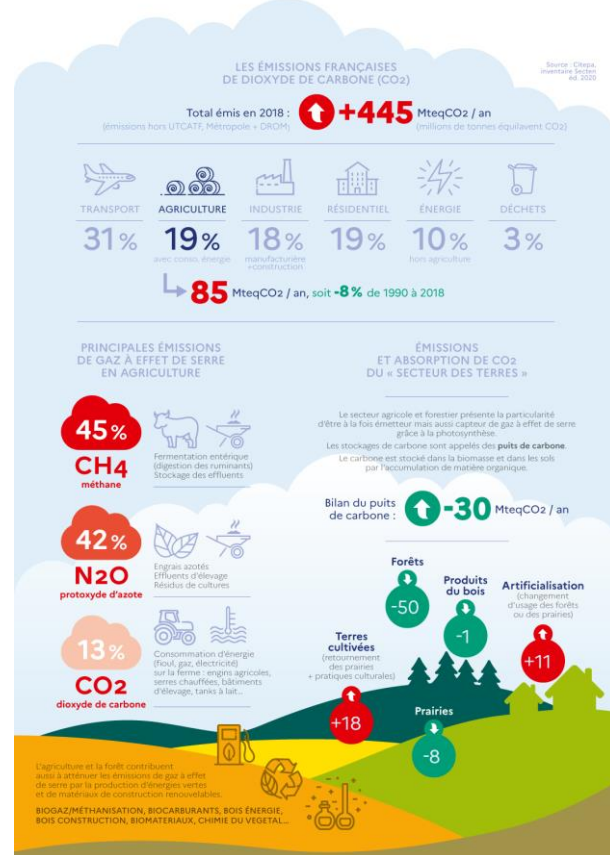
An ecological and inclusive transition towards carbon neutrality

How are we doing today?

GHG EMISSIONS  
AND ABSORPTION  
IN FRANCE IN 2017



Le secteur agricole et forestier est à la fois **émetteur et capteur** de gaz à effet de serre

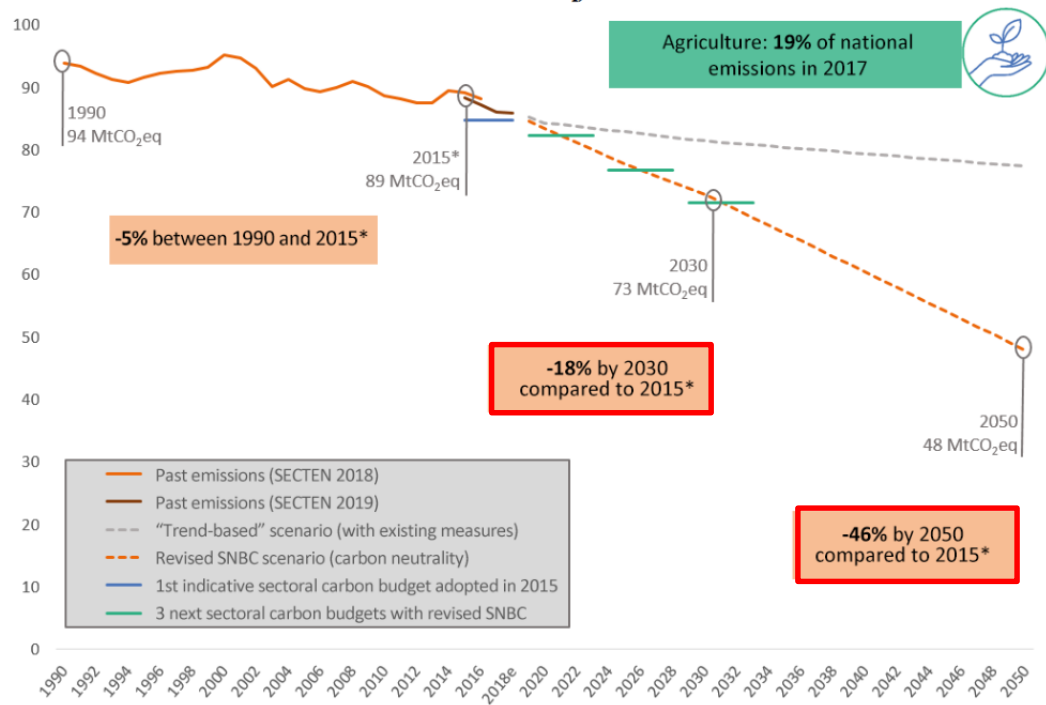


# 1.1 The French Low Carbon Strategy

## An ecological and inclusive transition towards carbon neutrality

- French mitigation policy (2021)
- Defines policy orientations to achieve the climate targets and climate neutrality in 2050
- **Specific target for agriculture : -18% of GHG emissions by 2030**
  - ✓ Support the development of technologies and practices (agro-ecology, precision agriculture, organic farming...)
  - ✓ Develop energy and material production to feed the growing bio-economy
  - ✓ Change consumption habits by reducing wastage and respecting public health recommendations leading to a more healthy and sustainable diet

**Figure 12- Past and projected emissions in the agriculture sector (excluding land) between 1990 and 2050 (in MtCO<sub>2</sub>eq)**



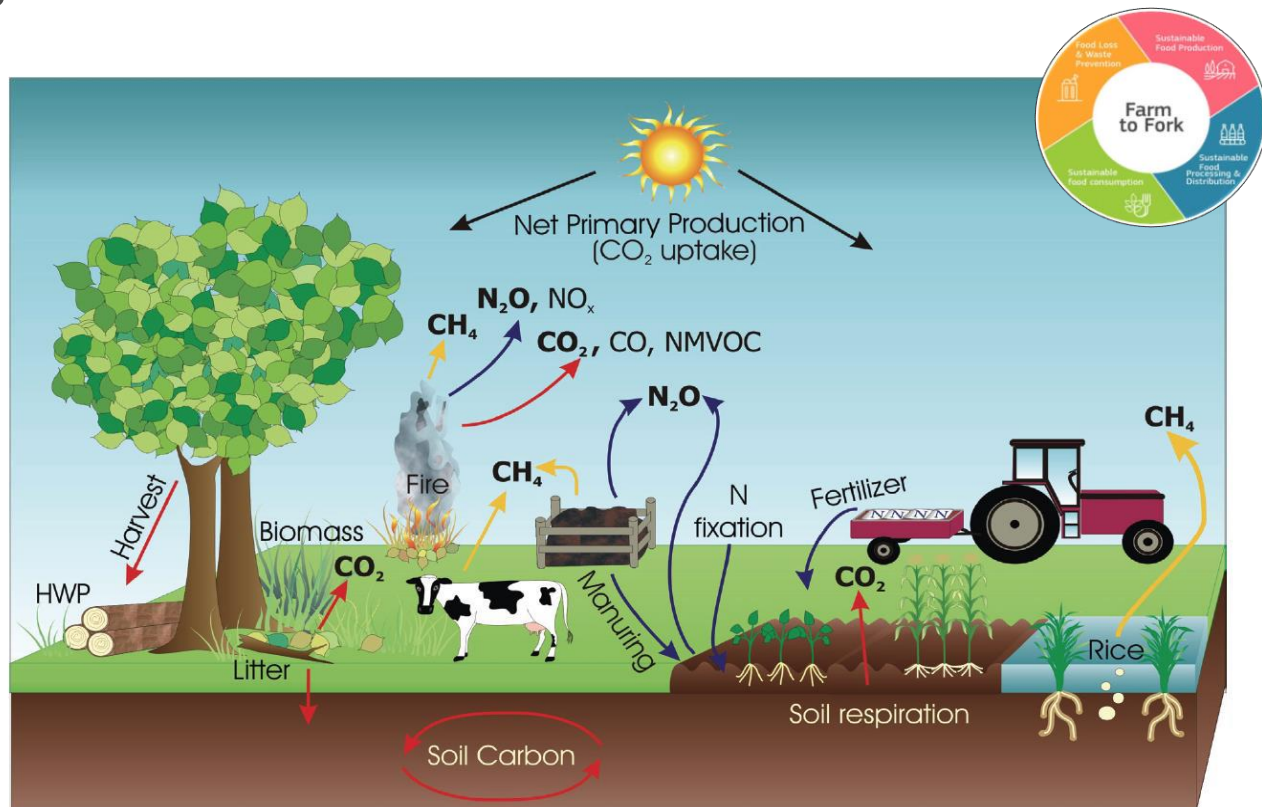
\*The emissions used for the year 2015 are those of the CITEPA SECTEN 2018 inventory.

# 1.2 Carbon farming : an opportunity to support low carbon practices in agriculture

Carbon farming refers to the management of carbon pools, flows and GHG fluxes at farm level.

France supports this integrated vision of carbon farming including both :

- **GHG emission reduction (covering CH<sub>4</sub>, N<sub>2</sub>O and CO<sub>2</sub>)**
- **and carbon sequestration.**



## 1.2 Carbon farming : an opportunity to support low carbon practices in agriculture

Why taking into account both GHG emissions and carbon sequestration ?

1. The agricultural sector emits mainly CH<sub>4</sub> and N<sub>2</sub>O, and CO<sub>2</sub> to a lesser extent ;
2. Capitalising on all efforts made by farmers to promote climate change and beyond carbon storage alone would speed up the achievement of the expected results in the fight against climate change ;
3. Carbon storage practices can have potentially synergistic or antagonistic effects on other GHG emissions => key issue of taking into account the articulation of carbon and nitrogen cycles ;
4. The agricultural practices covered by carbon farming not only provide mitigation benefits, but also bring several environmental (water and air quality, biodiversity protection,...) and social co-benefits.

The development of an economic model to reward farmers' efforts to combat climate change is a major challenge :

- this remuneration is primarily based on the use of **public funding** : CAP funds, LIFE Programme and national and regional resources ;
- but it can be complemented by additional revenues through the **sale of emission reductions on the voluntary market**.

## 1.2 Carbon farming : challenges of decarbonising pig farming and support available

- Objective 1 : reducing GHG emissions from the pig sector (about 6% of agricultural emissions in France)
  - Feed efficiency
  - Manure management
  - Energy efficiency
- Objective 2 : increasing carbon sequestration
  - In crop production : cover crops, agroforestry, legume crops, etc.

### Financing

CAP and recovery plan, *including investment measures*

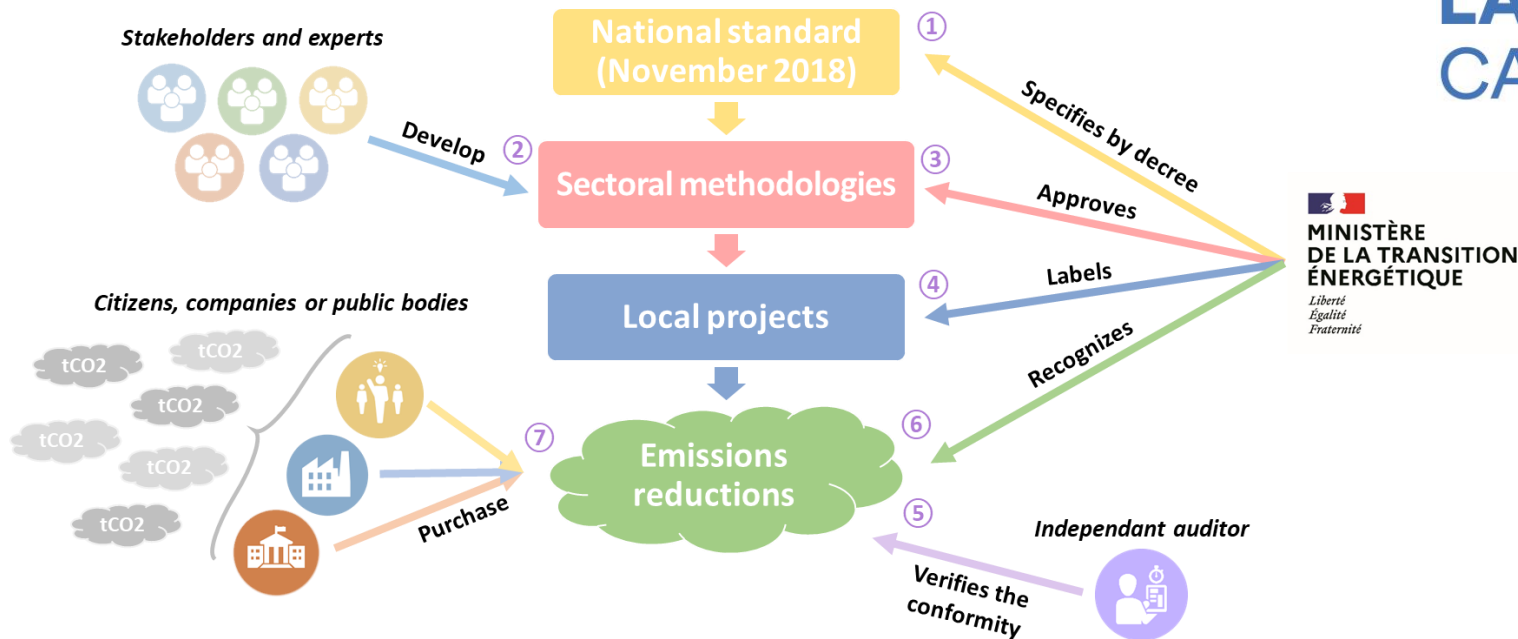
National financing for the support for the development of agricultural methanisation

A methodology in preparation under the “label bas carbone”



## 2. The French “low carbon label” and its implementation in agriculture: an example of a carbon credit scheme

### 2.1 French "Label bas carbone" : rewarding actors for climate change action at the local level



❖ The scheme is open to all types of investors (public or private, national or foreign) but projects must be located in France (mainland or overseas)



## 2.1 Methodologies available

### 11 methodologies have been approved

- **Forest :**

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

- **Transport :**

- Use of local co-working spaces

- **Building sector :**

- Reuse of building materials in rehabilitation operations

- **Agriculture :**

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

### Methods under development

- **Agriculture:** pig farming, agroforestry, winegrowing...

- **Forests:** forestry with continuous cover ...

- **Circular economy:** recycling and reconditioning of electronic devices..

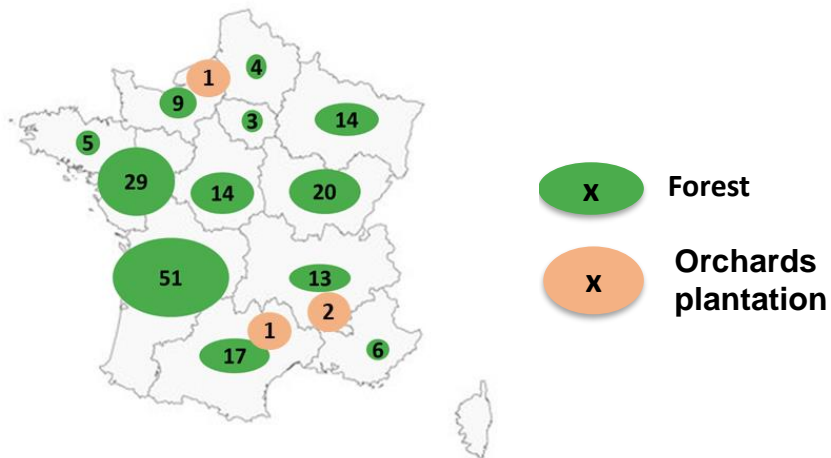
- **Wetlands:** improved protection of mangroves, of seagrass...

- **Building:** use of bio-based materials in new buildings...

- **Transport:** freight transport...

## 2.1 Projects : 210 labelled projects

- **205 forest projects** are labelled
  - Equivalent to **320 000 tCO2**
- **4 orchards plantation projects** are labelled
  - Equivalent to **5 000 tCO2**
- **1 agricultural project** is labelled (livestock-crop farming)
  - a collective project of **300 farms**
  - Equivalent to **140 000 tCO2**



## 2.1 Financing : a growing number of funders

Private :



Public :



*And many others ...*

The funder can buy emission reductions 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.

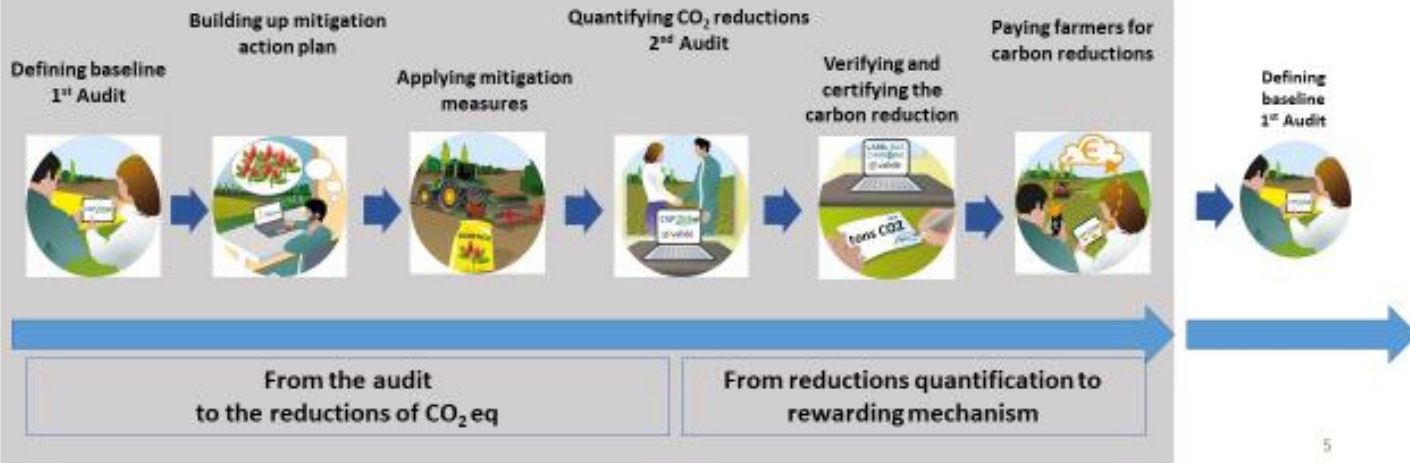
Only **direct financing** of emission reductions is possible, they can not be transferred between stakeholders

## 2.2 Example : CARBON AGRI methodology for mixed crops and livestock production systems

### CARBON AGRI : A result based methodology



#### 6 steps in 5 years



## 2.2 Example : CARBON AGRI methodology for mixed crops and livestock production systems













### 1. Assessment of the farm environmental performance

**Objective : quantify GHG emissions  
and carbon sequestration &  
cobenefits**

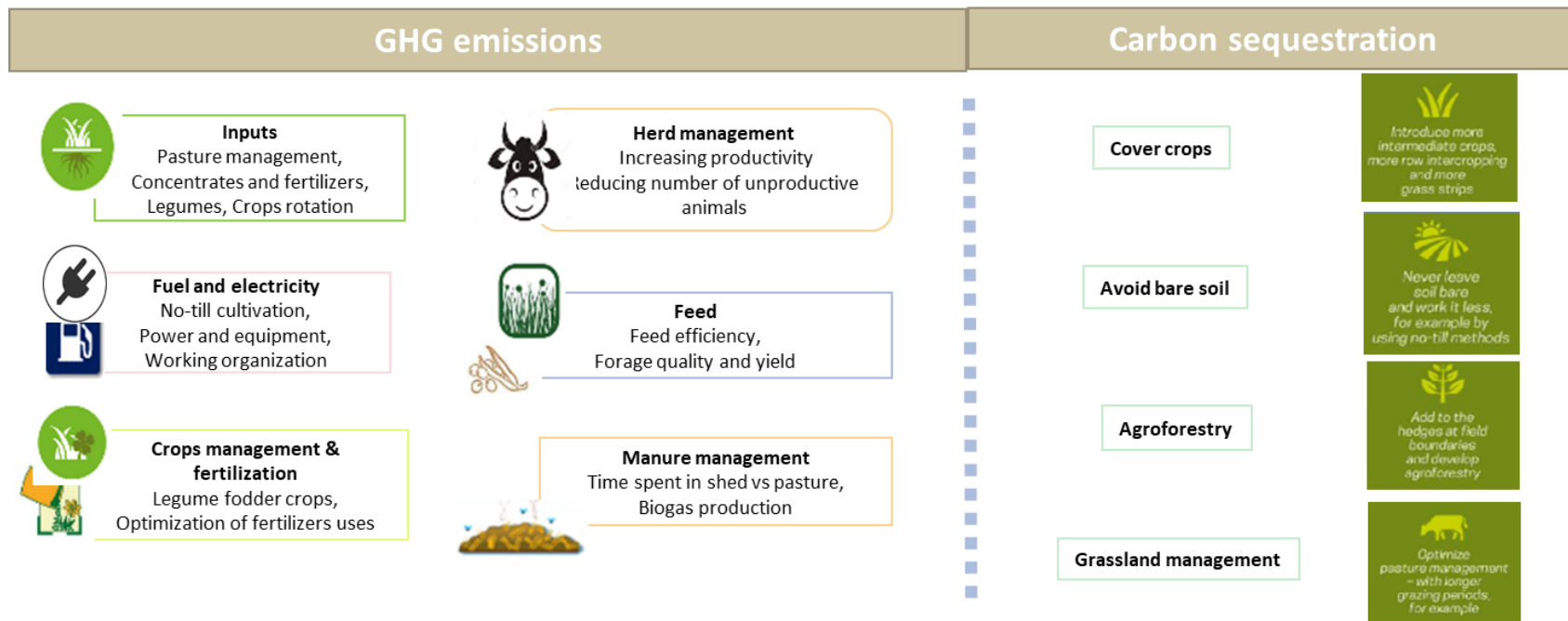
#### Define the baseline

- Only emission reductions that go beyond the baseline scenario are recognised
- Risk of non permanence and of release of carbon are taken into account

Animal categories				
Environmental burdens	 <b>Greenhouse gases emissions</b> kg CH <sub>4</sub> , kg N <sub>2</sub> O, kg CO <sub>2</sub> → kg CO <sub>2</sub> eq	 <b>Air quality (acidification)</b> kg NH <sub>3</sub> emitted → kg SO <sub>2</sub> eq	 <b>Water quality (eutrophication)</b> kg N and kg P leaching → kg PO <sub>4</sub> eq	 <b>Energy consumption</b> Direct and indirect energy → MJ
Positives contributions	 <b>Carbon sequestration</b> kg carbon /year	 <b>Conservation of biodiversity</b> ha eq of biodiversity	 <b>Food performance</b> Number of fed people/year <small>Perfarm®</small>	
Durability indicators	 <b>Economic performances</b> Production costs	 <b>Work conditions</b> Quantity of work, painfulness...		

## 2.2 Example : CARBON AGRI methodology for mixed crops and livestock production systems

### 2. Carbon mitigation action plan : defining a combination of measures to decrease GHG emissions and increase carbon sequestration



**A reduction of carbon footprint up to 15 to 20%**  
**→ 350 to 500 tons CO<sub>2</sub> equivalent on a 5 years period**

## 2.2 Example : CARBON AGRI methodology for mixed crops and livestock production systems

### 3. Monitoring the progresses through the project life and the outcome at the end



Also monitoring the social and environmental co-benefits

Soil fertility  
& Food performances

Renewable energy



Water quality  
Water consumption

Biodiversity&Landscape



Reducing deforestation

Air quality



# Thank you for your attention