



# Are low carbon farms sustainable in sheep production across Europe?

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Avec  
la contribution  
financière du compte  
d'affectation spéciale  
développement  
agricole et rural  
CASDAR

 **MINISTÈRE  
DE L'AGRICULTURE  
ET DE L'ALIMENTATION**  
*Liberté  
Égalité  
Fraternité*

# Context

Simplified sustainability  
assessment associated to a  
carbon diagnosis

## LIFE GREEN SHEEP IS:

**5 years**  
European project,  
from October 2020  
to September 2025

€ **4,6 M**  
budget

**1 355**  
demonstrative  
farms involved

**40** partners from  
**5** European countries

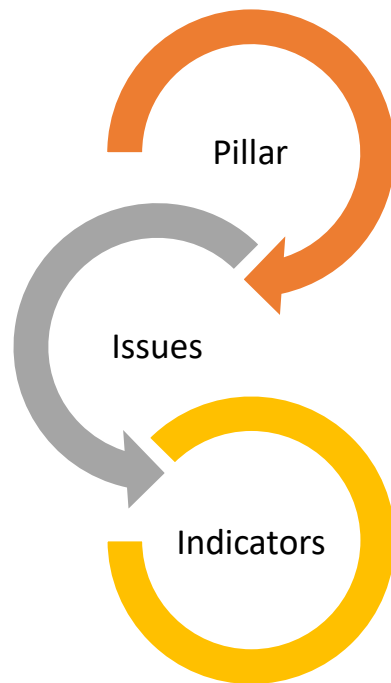
Reduce by **12 %**  
GHG emissions while  
maintaining farms'  
sustainability

**282**  
innovative farms  
involved in the  
implementation of  
action levers



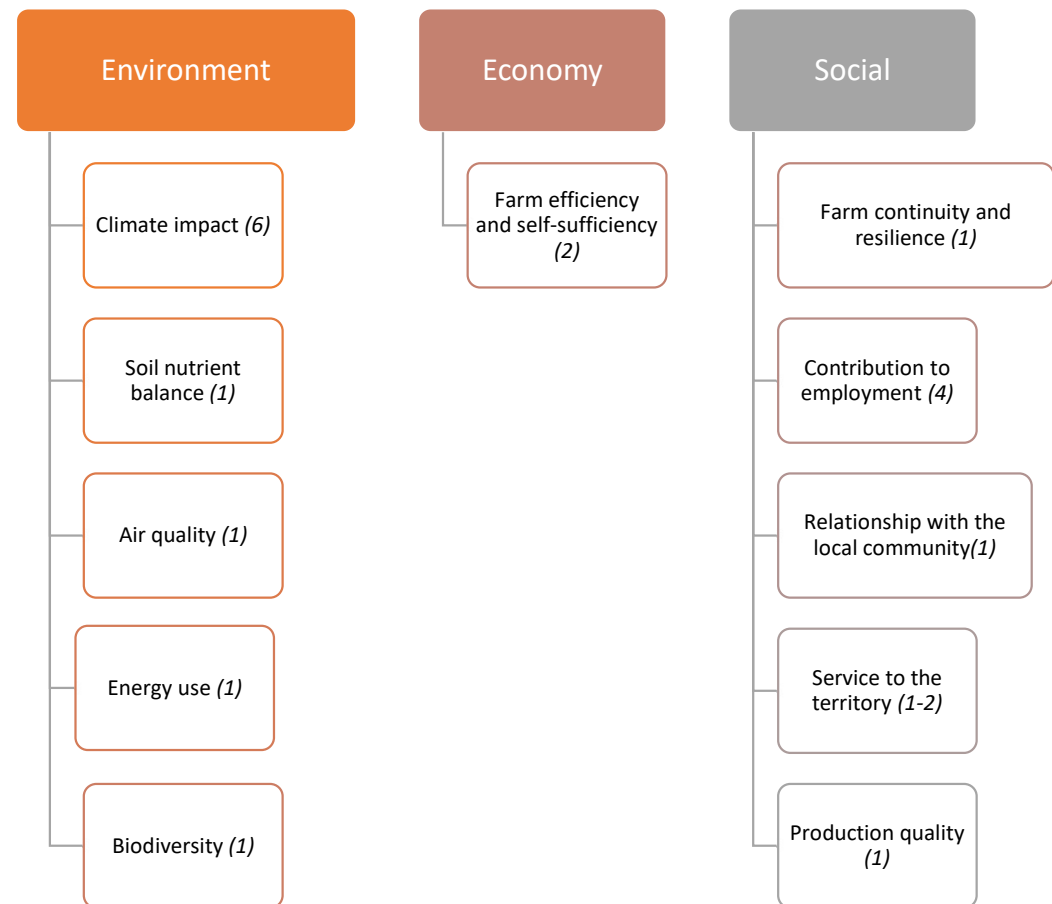
# Methodology

## *Data collection*



Built from existing tools (DEO in France)

### List of issues (nb indicators) in demonstrative farms



# Methodology

## Scoring

- Use of national references to build the ranking (database sorted out by decile)

- Example:

Indicator :	GHG emissions/FU - gross emissions			
Farm result :	2,5			
Deciles from references database :	D2	D4	D6	D8
	2,30	2,60	3,07	3,67
Rank :	4			

- Each indicator is scored between 1 and 5
- Equal weight for each indicator
- Aggregation of indicators into each issue

- Example :

Economic viability and financial independence	Score
Gross margin/labour unit	3
Gross margin/kg milk (or meat) produced	3
Dependencies on subsidies	4
Annuity	2

The score of the issue « Economic viability and financial independence » is equal to 3  
 $(3 + 3 + 4 + 2) / 4$

# Methodology

## *Analysis*

- Question: Are the low carbon farms sustainable?
- To answer it, comparison of:
  - Top5= which have a ranking of 5 (the best) on GHG/FU.
  - LowerTop5 = farms that have a rating of less than 5

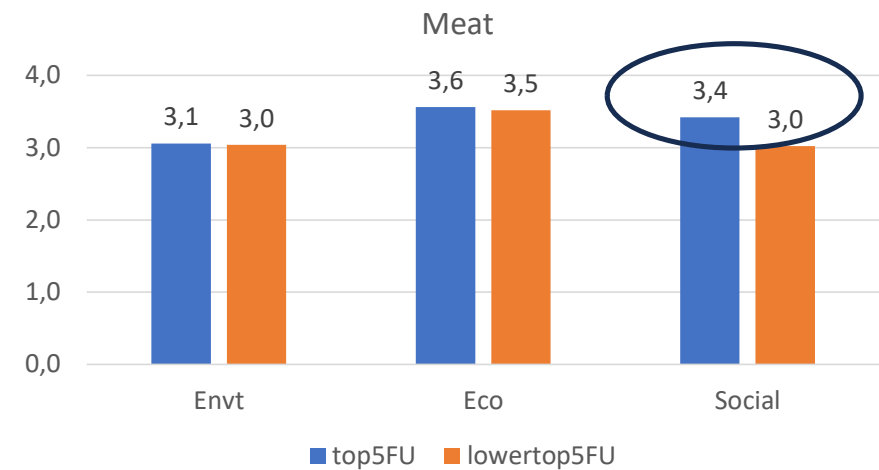
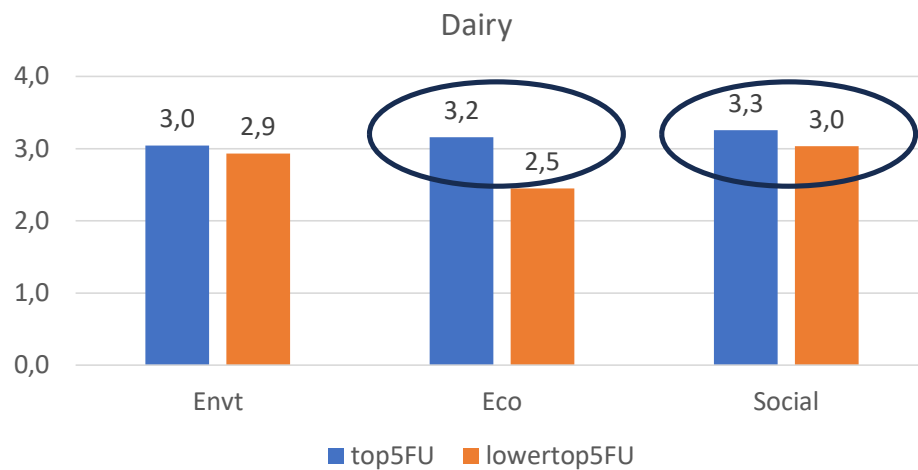




# Results

## Pillar scale

Legend  
Significant difference



- Are these farms more sustainable?
  - Inconclusive for the environmental pillar whatever the productions!
  - Yes for the economic pillar in dairy sheep
  - Yes for the social pillar in the 2 productions

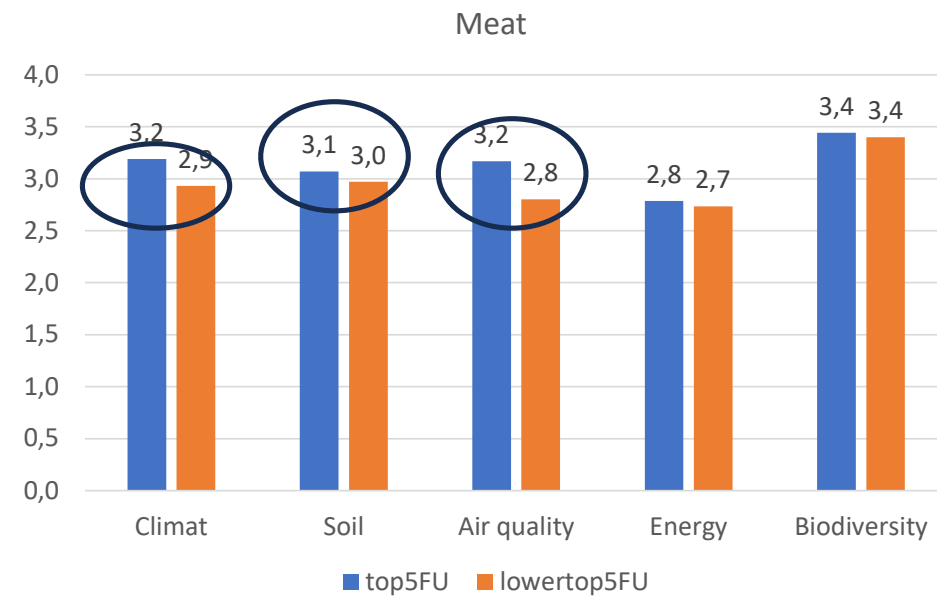
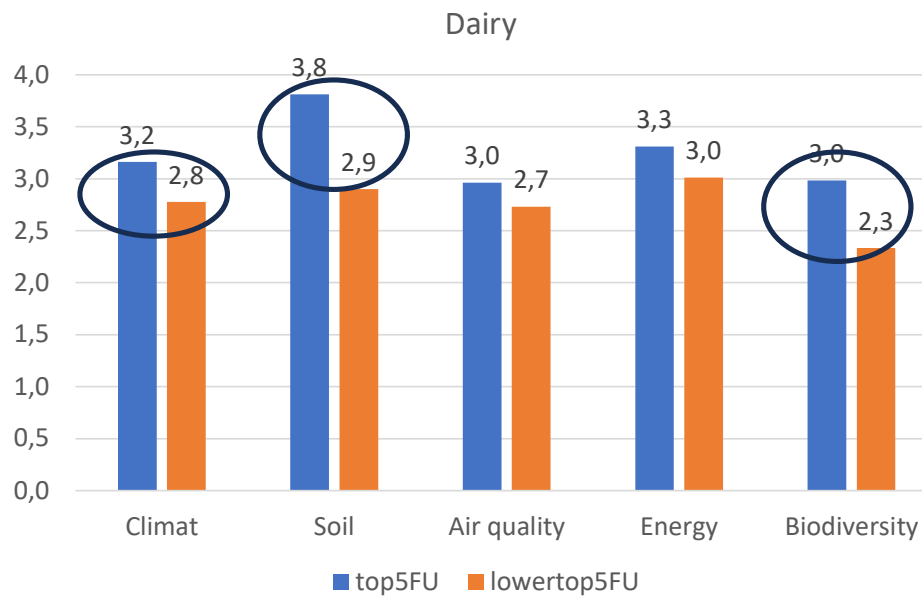
EU: 1169 – top 5 : 259

# Results

## *Issues scales*

Legend  
Significant difference

### Environment pillar



**Significant effect of climate and soil in the 2 productions**  
**Biodiversity in dairy, air quality in meat**

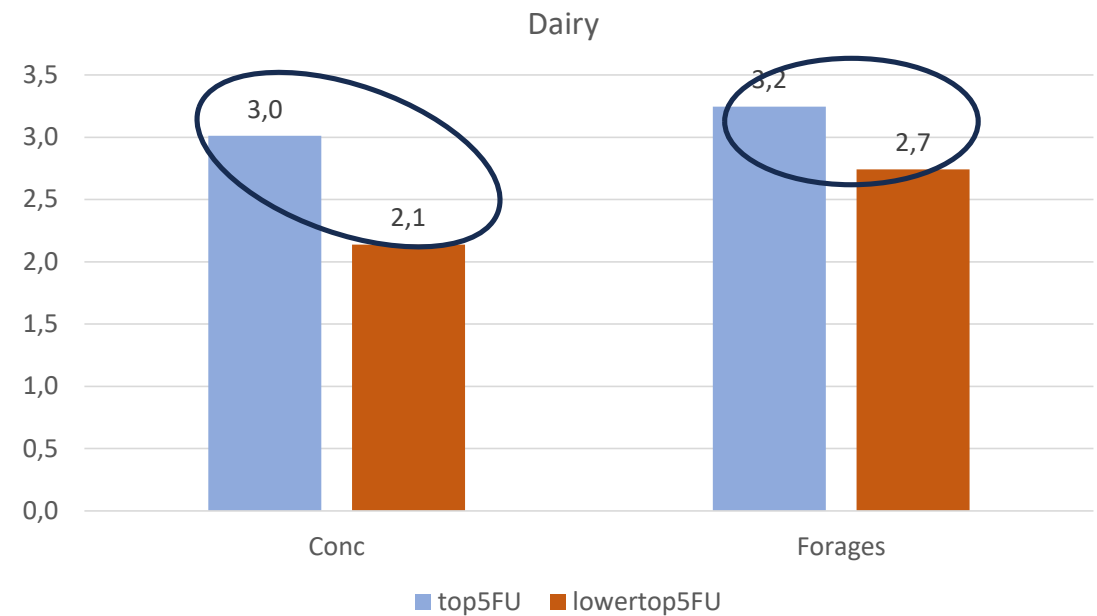
# Results

## *Issues scales*

Eco pillar

Significant effect of the 2 indicators

Legend  
Significant difference



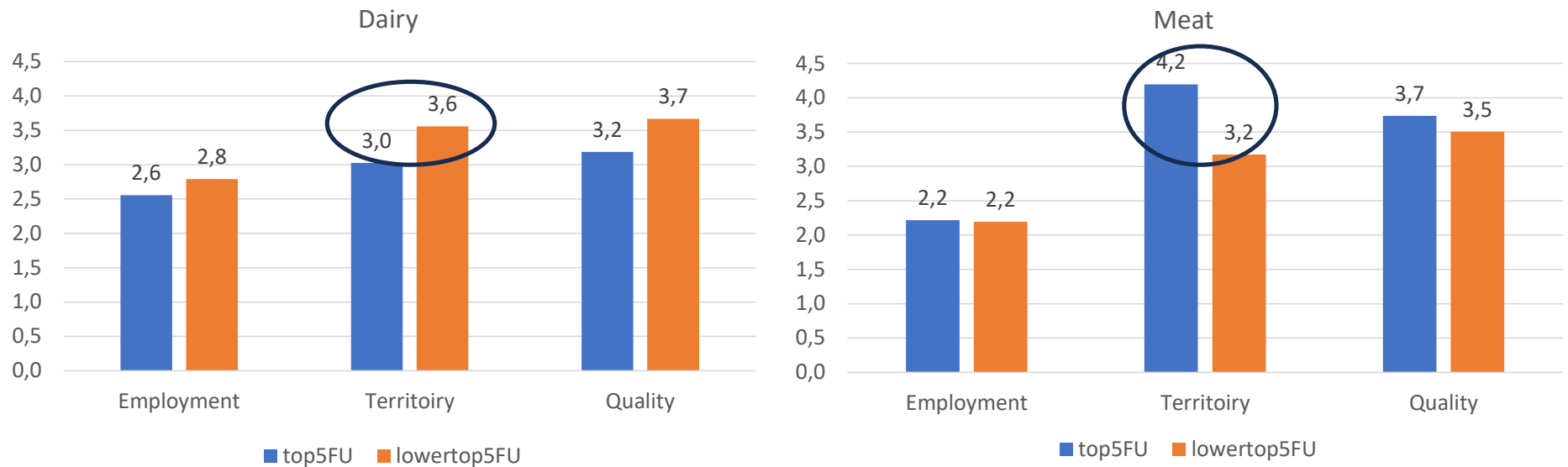


# Results

## *Issues scales*

Legend  
Significant difference

### Social pillar



Significant effect of the territorial issue

# Discussion

- At the level of the pillars: marked effect only for the social component, and eco in dairy → **At large scale low carbon farm are as sustainable as others.**
- At the scale of the issues:
  - Environment: climate, soil in all types of production
  - Eco: only in dairy with autonomy in concentrates and fodder
  - Social : territorial issue.
- Question of the number of collected data: ongoing analysis between demonstrative (19 indicators) and innovative (33 indicators) farms to see if there are differences.



# Thank you for your attention

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[idele.fr](http://idele.fr)



For more information on LIFE Greensheep project:  
[life-green-sheep.eu](http://life-green-sheep.eu)



Thanks to all partners for their involvement in the project

