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## ClieNFarms in a nutshell

Jacques-Eric Bergez

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**ClieNFarms**  
Climate Neutral Farms

**in a nutshell**

**Jacques-Eric Bergez - INRAE**

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**CGIAR : MITIGATE + meeting, 11/05/2022**

# The project at a glance

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EU contribution:  
€ 11 999 974,78  
Overall Budget:  
€ 13 639 536



48 months  
January 1st 2022

Testing and  
demonstrating **systemic  
innovations** in support  
of the F2F Strategy.  
(LC-GD-6-1-2020)

33 partners &  
14 European  
countries



# Goal

An Innovation Action project, funded by the European Commission in supporting of the European Green Deal, that aims to **co-develop and upscale systemic locally relevant solutions to reach climate neutral and climate resilient sustainable farms across Europe**. A consortium of 33 partners will interactively integrate and **improve existing solutions to achieve economically viable business models in farming systems** through a multi-actor approach.

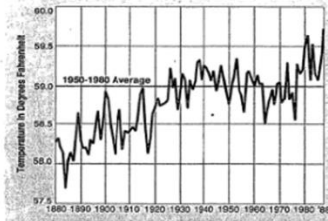
# There is no day without alarming news

"All the News That's Fit to Print"

## The New York Times

VOL. CXXXVII... No. 47,546 Copyright © 1998 The New York Times NEW YORK, FRIDAY, JUNE 24, 1998 \$5.00

### Global Warming Has Begun, Expert Tells Senate



**Global Warming: Greenhouse Effect?**  
Average global temperatures through the first five months of 1998. As a baseline, scientists use the global average from 1950 to 1980.  
Source: James E. Hansen and Sargis Ghobadipour  
The New York Times/June 24, 1998

### Sharp Cut in Burning of Fossil Fuels Is Urged to Battle Shift in Climate

By PHILIP SHARPCOFF  
Special to The New York Times  
WASHINGTON, June 23 — The earth has been warmer in the first five months of this year than in any comparable period since measurements began 130 years ago, and the higher temperatures can now be attributed to a long-expected global warming trend linked to pollution, a space agency scientist reported today.  
Until now, scientists have been cautious about attributing rising global temperatures of recent years to the predicted global warming caused by pollutants in the atmosphere, known as the "greenhouse effect." But today Dr. James E. Hansen of the National Aeronautics and Space Administration told a Congressional committee that it was 99 percent certain that the warming trend was not a natural variation but was caused by a buildup of carbon dioxide and other artificial gases in the atmosphere.

### Drought Raising Food Prices; Inflation Effect Seems Minor

By ROBERT D. HERSEY JR.  
Special to The New York Times  
An impact lasting centuries on climate change, said in an interview that there was no "magic number" that showed when the greenhouse effect was actually starting to cause changes in climate and weather. But he added, "It is time to stop waffling so much and say that the evidence is pretty strong



© CanStockPhoto.com



Californ 24

## Disaster at sea: global warming hits UK birds

By MICHAEL MCCARTHY  
Environment Editor

HUNDREDS OF thousands of Scottish seabirds have failed to breed this summer in a wildlife catastrophe which is being linked by scientists directly to global warming.  
The massive unprecedented collapse of nesting attempts by several seabird species in



unprecedented in Europe." More than 6,000 pairs of great skuas were recorded in Scotland in the same census; this year they have produced a handful of chicks — perhaps fewer than 10 — while the arctic skuas (1,100 pairs in the census) have failed to produce any surviving young.  
The 51,000 pairs of arctic terns, and the 18,700 pairs of Shetland kittiwakes — small gulls — have "probably suffered complete failure", said Mr Ellis.  
In Orkney the picture is very similar although detailed figures are not yet available. "It looks very bad," said the RSPB's warden on Orkney mainland, Andy Knight. "Very few of the terns have raised any chicks at all."  
The counting and monitoring is still going on and the figures are by no means complete. It is likely that puffins, for example, will also have suffered massive breeding failure but because they nest deep in burrows, this is not immediately obvious.  
But the astonishing scale of what has taken place is already clear — and the link to climate change is being quickly made by scientists. It is believed that the microscopic plankton on which they nested larvae feed are moving northwards as the sea water warms, leaving the baby fish with nothing to feed on.  
This is being seen in the North Sea in particular where

Newspaper of the Year

## THE INDEPENDENT

MONDAY 24 JANUARY 2000

### MediaWeekly

20-PAGE SUPPLEMENT

SYLVIA AUTON: FIRST LADY OF MAGAZINES CHARLIE WHELAN: ON THE BUSINESS PRESS JON SNOW: MY LIFE IN MEDIA

● Climate change: report warns point of no return may be reached in 10 years, leading to droughts, agricultural failure and water shortages

## Countdown to global catastrophe

By Nicholas Me Carter  
Environment Editor

ATMOSPHERIC CARBON DIOXIDE

1880 1900 1920 1940 1960 1980 2000 2010

280 300 320 340 360 380 400

PPM

Year

© Reuters



**Manure  
applied to  
soils**



**Manure left  
on pasture**



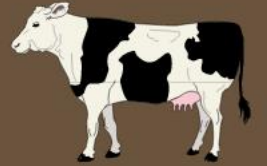
**Manure  
management  
& housing**



**Synthetic  
fertilizers**



**Crop  
residues**



**Enteric  
fermentation**

**Agriculture is part of the problem**



**ClieNFarms**  
Climate Neutral Farms



**Manure applied to soils**



**Manure left on pasture**



**Manure management & housing**



**Synthetic fertilizers**



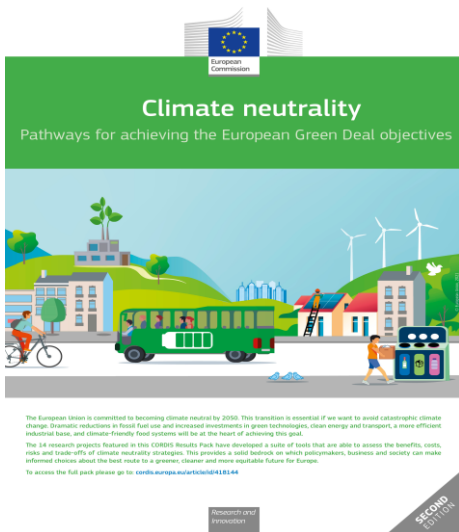
**Crop residues**



**Enteric fermentation**

**Agriculture is part of the problem**

**but is also part of the solution!**



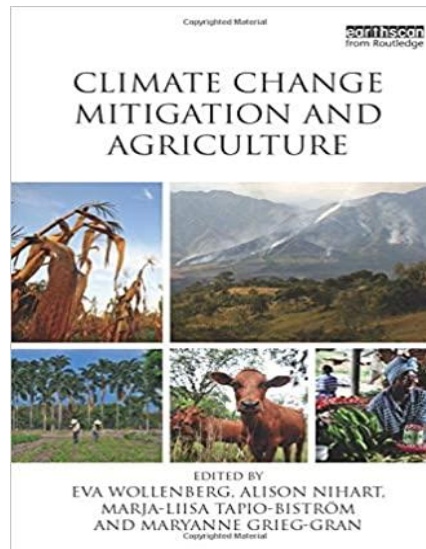
**Climate neutrality**  
Pathways for achieving the European Green Deal objectives

The European Union is committed to becoming climate neutral by 2050. This transition is essential if we want to avoid catastrophic climate change. Dramatic reductions in fossil fuel use and increased investments in green technologies, clean energy and transport, a more efficient industrial base, and climate-friendly food systems will be at the heart of achieving this goal.

The 14 research projects featured in this COVID Resilience Pack have developed a suite of tools that are able to assess the benefits, costs, risks and trade-offs of climate neutrality strategies. This provides a solid backdrop on which policymakers, business and society can make informed choices about the best route to a greener, cleaner and more equitable future for Europe.

To access the full pack please go to: [ec.europa.eu/euroclima/18344](https://ec.europa.eu/euroclima/18344)

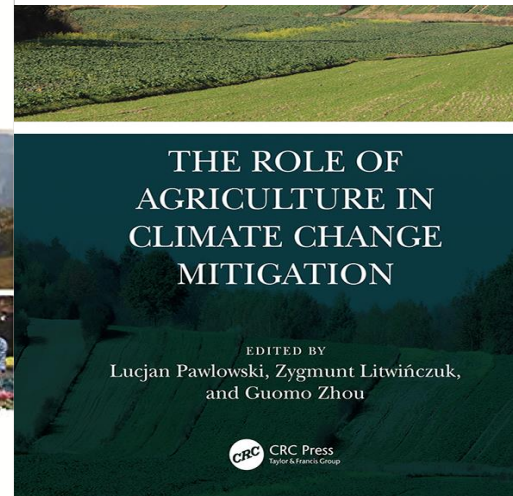
Research and innovation  
SECOND EDITION



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**CLIMATE CHANGE MITIGATION AND AGRICULTURE**

EDITED BY  
EVA WOLLENBERG, ALISON NIHART,  
MARJA-LIISA TAPIO-BISTRÖM  
AND MARYANNE GRIEG-GRAN



**THE ROLE OF AGRICULTURE IN CLIMATE CHANGE MITIGATION**

EDITED BY  
Lucjan Pawłowski, Zygmunt Litwińczuk,  
and Guomo Zhou

CRC Press  
Taylor & Francis Group



- **CARISMA: Coordination and Assessment of Research and Innovation in Support of Climate Mitigation Action**
- **EIFFEL: REVEALING THE ROLE OF GEOS AS THE DEFAULT DIGITAL PORTAL FOR BUILDING CLIMATE CHANGE ADAPTATION & MITIGATION APPLICATIONS**
- **LANDMARC: LAND-use based MitigAtion for Resilient Climate pathways**
- **ASFORCLIC : Adaption strategies in forestry under global climate change impact**
- ...

# Overall concept

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ClieNFarms scope is based on a demonstration approach through the creation of **I3S**.



## Innovative

Induce emergence and adoption of efficient innovation including different elements such as finance; banks; collaborative proposals; etc.



## Systemic

Takes into account the farm and the surrounding (eco)systems (suppliers; advisers; researchers; etc)



## Solution Spaces

Proposes and tailors different solutions for each farm depending on their pedoclimatic conditions, resources and constraints.



NESTLE-UK&I-UNIVLEEDS

CRA-W

Danone

NESTLE-UA

**Pedoclimatic regions**

- Mediterranean
- Continental
- Mountain
- Oceanic

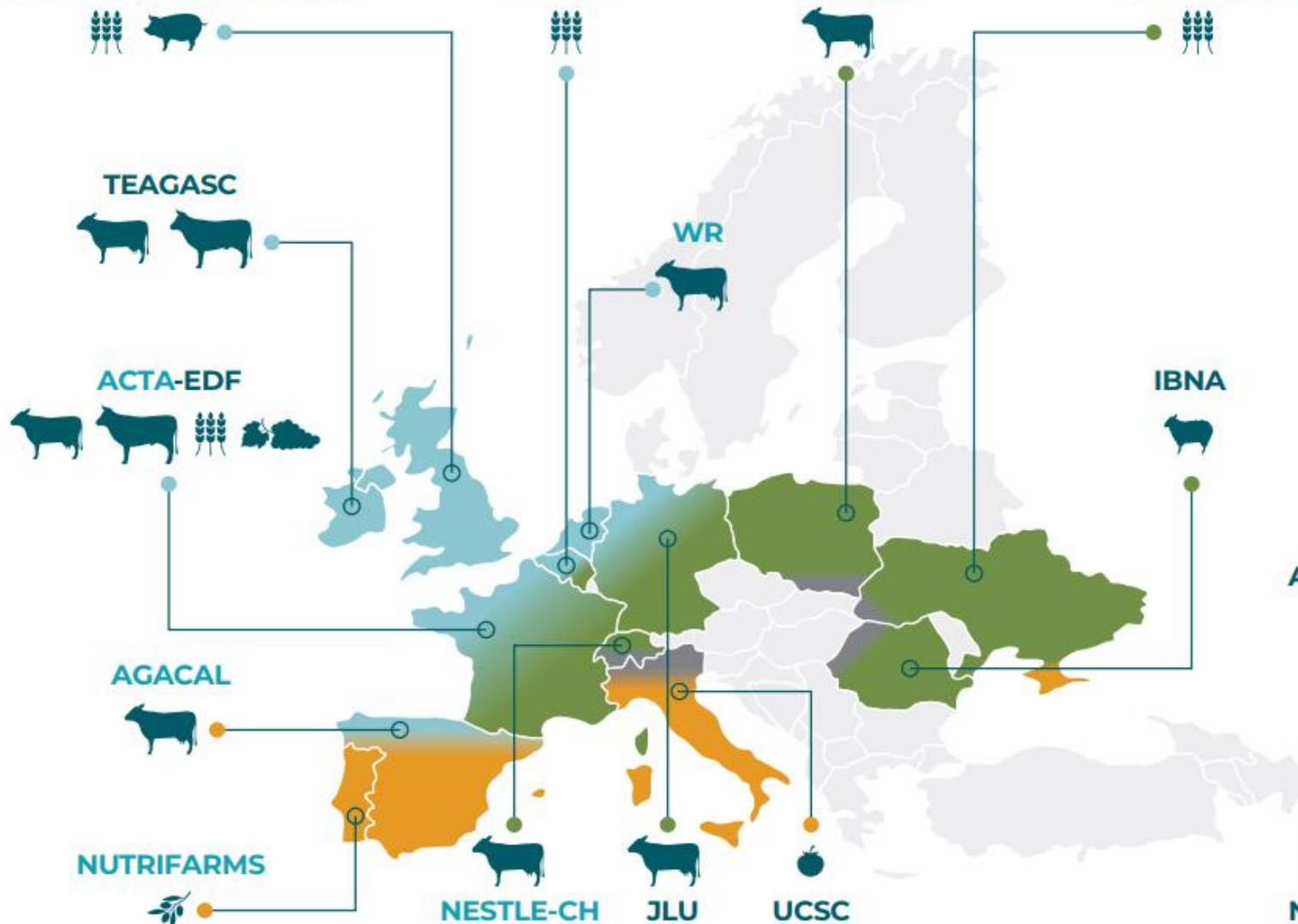
**Production systems**

- Dairy
- Monogastrics
- Arable crops
- Specialised culture
- Beef
- Sheep

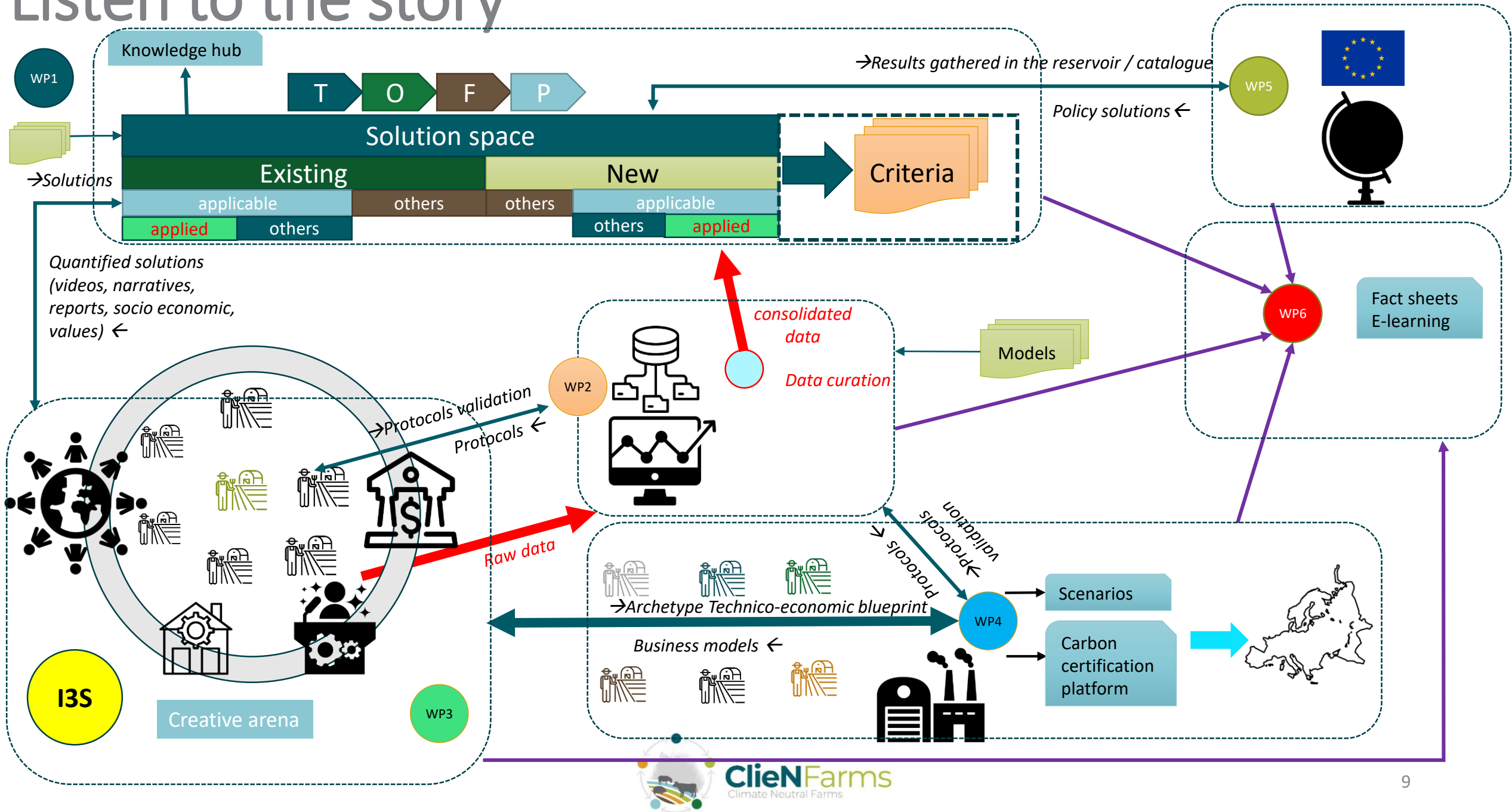
**Partners in charge of I3S**

ACTA; CRA-W; UNIVLEEDS; TEAGASC; EDF; JLU; UCSC; IBNA; AgResearch; WR

**Supply chain involved**  
NESTLE-UK&I; AGACAL; NUTRIFARMS; NESTLE-CH; NESTLE-UA; Danone

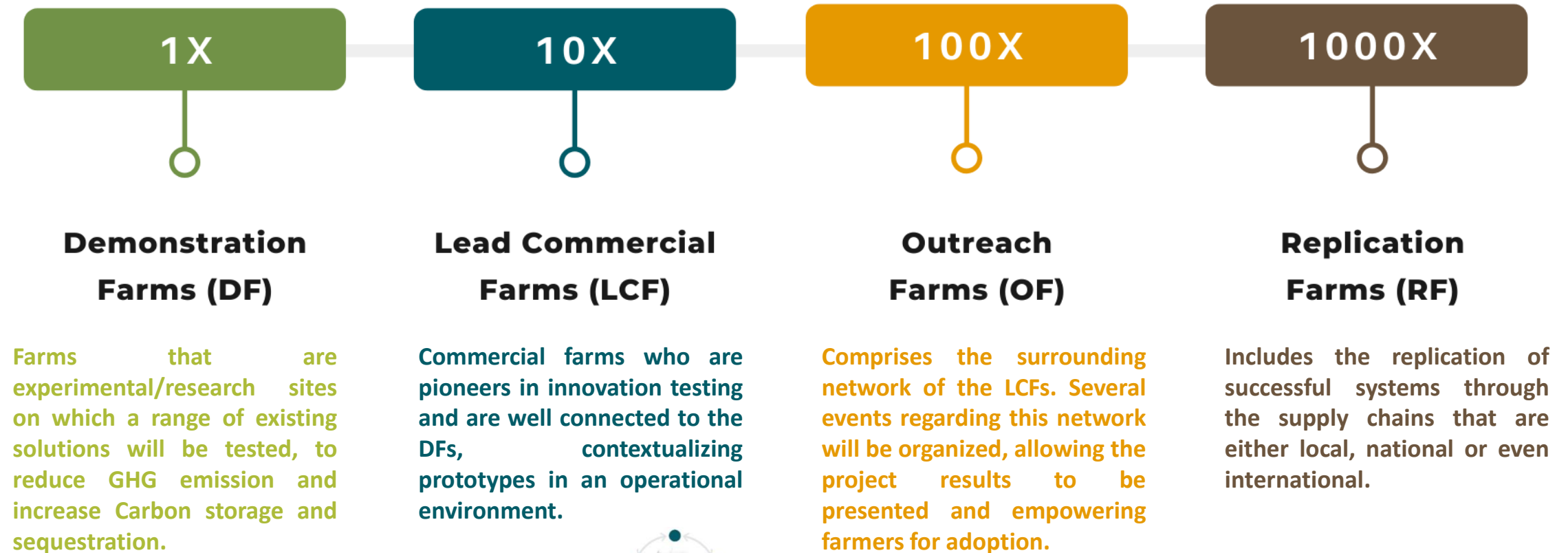


# Listen to the story



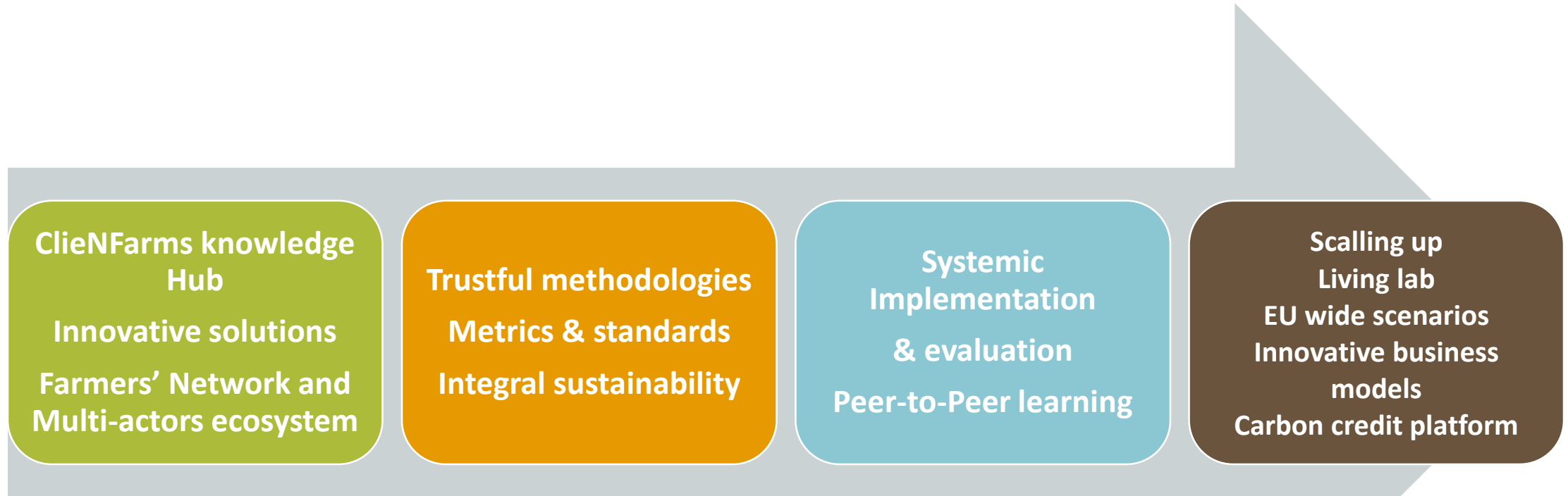
# Overall concept

The goal of I3S is to develop business models that ensure the financial sustainability of the solutions, with an upscaling methodology.



# General outputs

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DEVELOPING & DEPLOYING I3S

### WP1 - I3S European Solution Space

I3S network architecture and management rules

Baseline of the carbon footprint of I3S

Knowledge reservoir and catalogue of solutions

### WP2 - I3S Methodology Development

Multi-criteria analyses and theoretical framework

Catalogue of strengths and weaknesses of models

Toolkit "prototype" evaluation & subsequent "best management practice(s)"

### WP3 - I3S Farm Deployment

Demonstration farms and I3S for each farm

Action plans for each Lead Commercial Farm

Quantification of the impact of I3S to achieve climate neutrality

Barriers to adoption/uptake of technologies by farmers

DELIVERING IMPACTS

### WP4 - Scaling-up impacts of I3S

Holistic scaling approach for I3S

Business models for sourcing district transformation

Carbon credit platform

EU wide scenarios for climate neutral farms

### WP5 – Synergies with other EU projects, policies and initiatives

Cooperation with Commission services

Synergies with other Green Deal projects

International Advisory Board

### WP6 - Communication, Dissemination, Training and Exploitation

Website, social media, newsletter

Activating the community of production chain actors

Dissemination of project results

Training activities & capacity building

Exploitation plan

WP7 - PROJECT MANAGEMENT



# Expected Impacts

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Demonstrate that innovative systemic solutions have the potential to generate positive impact by 2030.

Achieving climate neutrality of farms and farming systems

Reducing GHG emissions

Increasing carbon sequestration and storage



# Expected Impacts

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Providing sufficient, safe, nutritious, healthy and affordable food for all.



Improving the overall sustainability of food systems.



Improving the resilience of food systems to shock and stress.

# Follow us on our digital channels!



SCAN ME



SCAN ME



SCAN ME



SCAN ME







**ClieNFarms**  
Climate Neutral Farms

# Thank you for your attention!

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AGACAL  
AXENCIA GALEGA  
DA CALIDADE ALIMENTARIA



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