



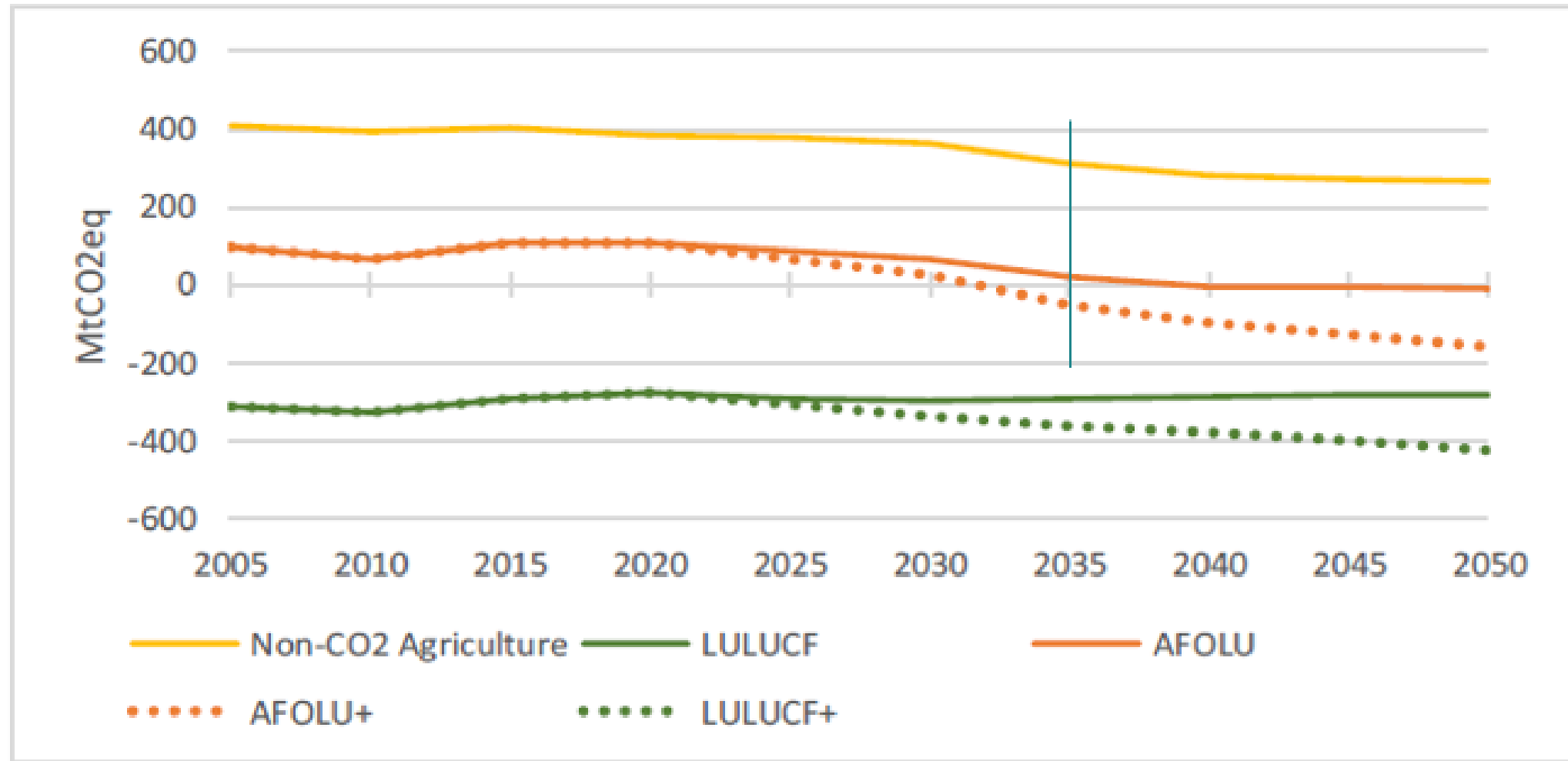
# Carbon Farming in the EU

Norges Bondelag Webinar, 19<sup>th</sup> November 2020:

**“Karbonlagring i jord”**

*Christine Muller, Directorate General for Climate Action*

# Agriculture, Forestry and Land Use towards climate neutrality by 2035

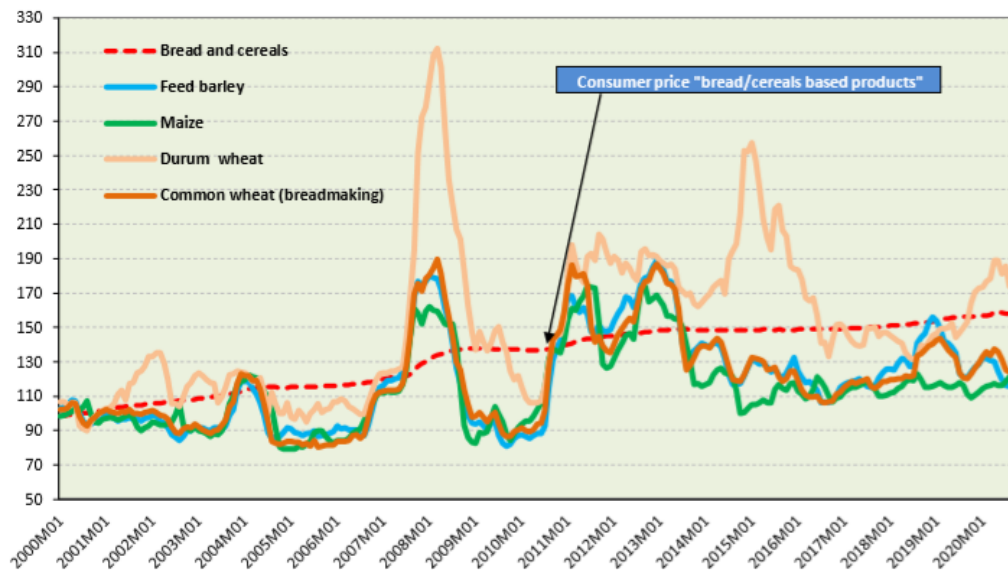


Source: 2030 Climate Target Plan, EC.

# F2F Strategy: Food System Sustainability, Carbon Farming Initiative

## FAIR

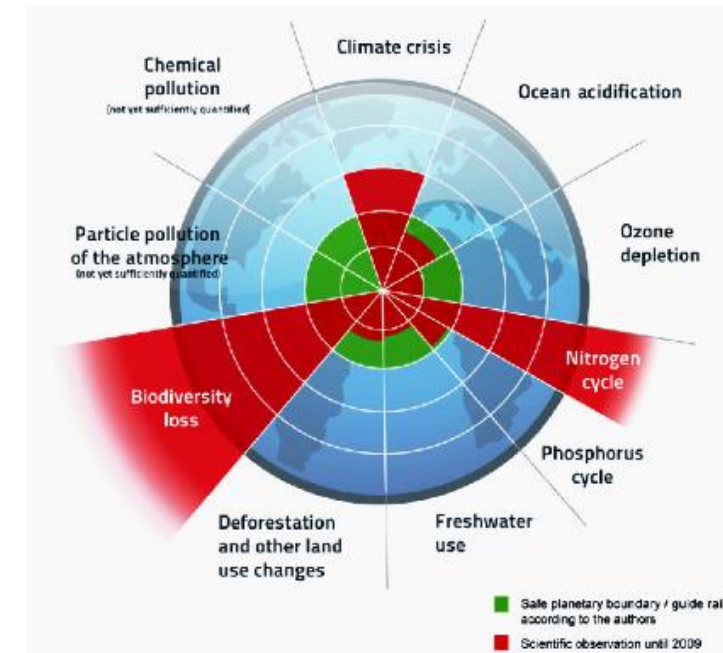
Chart 3 Cereals/bread and cereals based products: EU agricultural market and consumer price developments (January 2000 until September 2020, 2000=100)



## HEALTHY



## GREEN



Sources: DG AGRI, EAT-Lancet report, Stockholm Resilience Centre.

# EU Carbon Farming Study and Guidelines



**Technical Guidance Handbook**  
*Setting up and implementing result-based  
carbon farming mechanisms in the EU*

Analytical Support for the Operationalisation of an EU Carbon Farming Initiative

## Project tasks and flow

### •Task 1

•Global  
experiences

### Task 2

EU context

Building on T1  
findings

Identification of  
barriers,  
challenges and  
solutions

Selection of case  
studies

1<sup>st</sup> Roundtable  
(Oct 2019)

### Task 3

Case studies

oLearning from  
existing projects

Experience and  
knowledge sharing

Design  
considerations for  
operationalisation  
of initiatives

### Task 4

Guidance

Design and operational  
guidance

Building on the  
experiences from the  
case study analyses

5 | 23 SEPTEMBER 2020  
2ND ROUNDTABLE ON CARBON FARMING

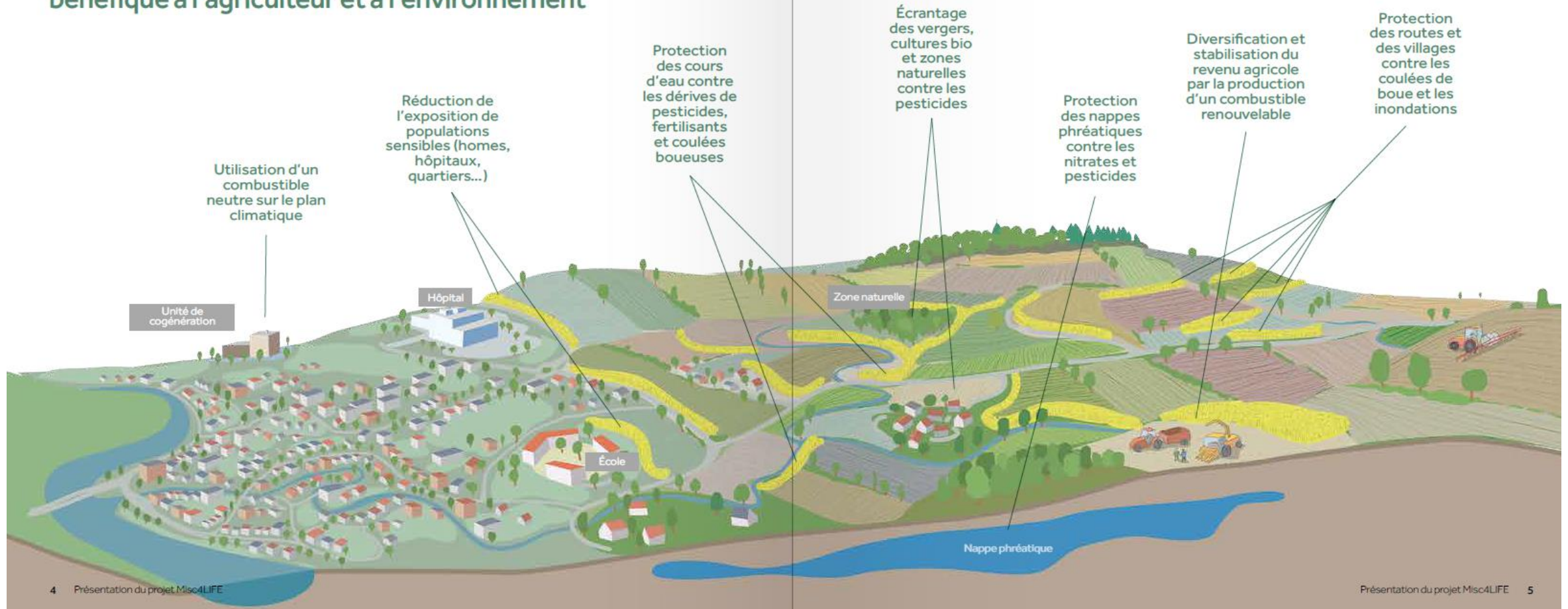





# Enabling Carbon Farming – LIFE Prep Project

L'implantation d'un maillage de miscanthus à l'échelle d'un bassin versant

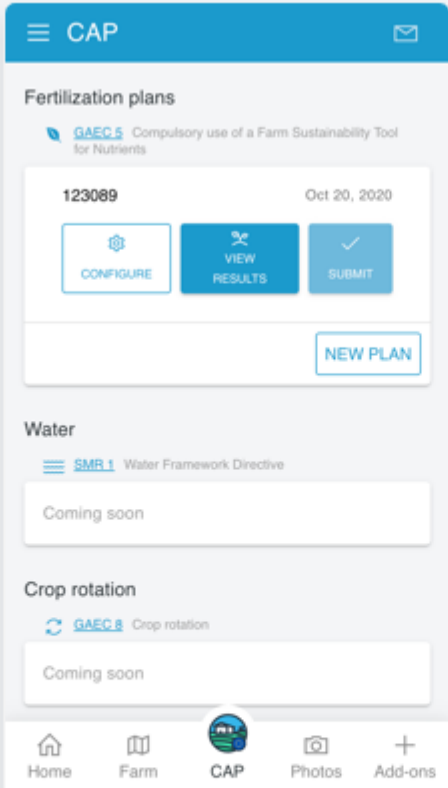
Un modèle innovant de production de biomasse  
bénéfique à l'agriculteur et à l'environnement



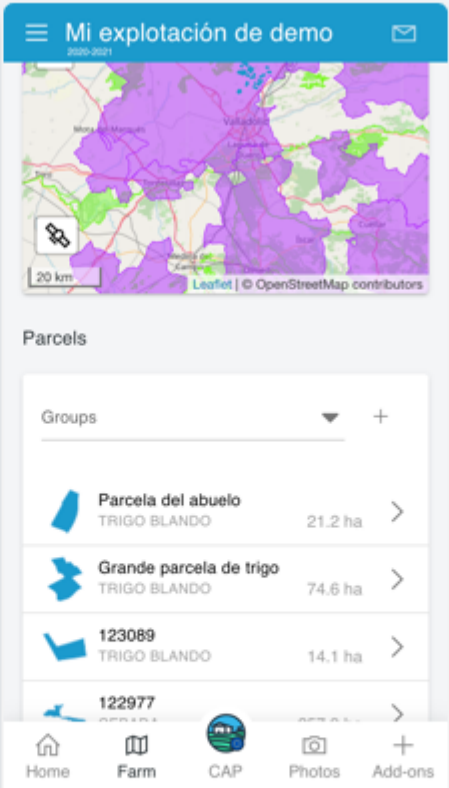
# Carbon Farming – Lighthouse farms and piloting



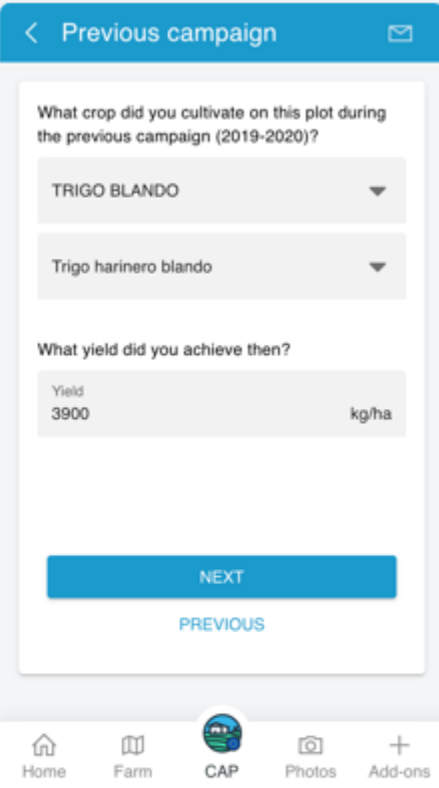
The FaST mobile app surfaces Copernicus and Galileo capabilities to the farmer



The FaST mobile app acts as a landing point for multiple CAP and environment-related use



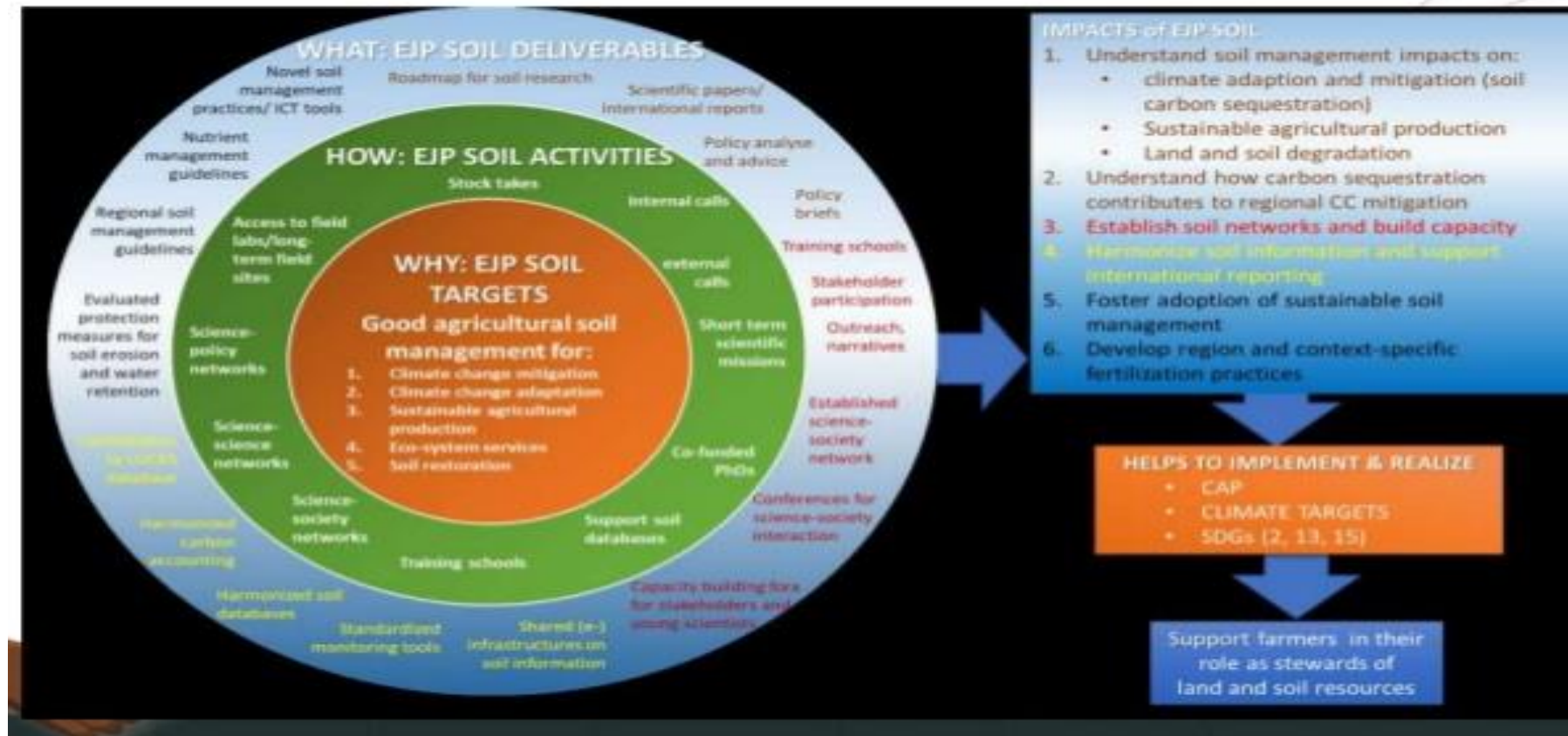
The parcels of the farmer are displayed with regulatory layers such as NVZ and Natura2000



Fertilization advice is provided through a user-friendly interface

# Enabling Carbon Farming – Soil Carbon Mapping

## EUROPEAN JOINT PROGRAMME (EJP) ON AGRICULTURAL SOIL MANAGEMENT





# Carbon Farming on mineral soils – key practices

**The way to sequester carbon is via regenerative farming practices**

**These 5 practices are proven to develop carbon enriched soils ...**



**Cover crops,  
esp. legumes**



**Reduced  
tillage**



**Longer crop  
rotations**



**Reduced  
synthetic  
inputs**

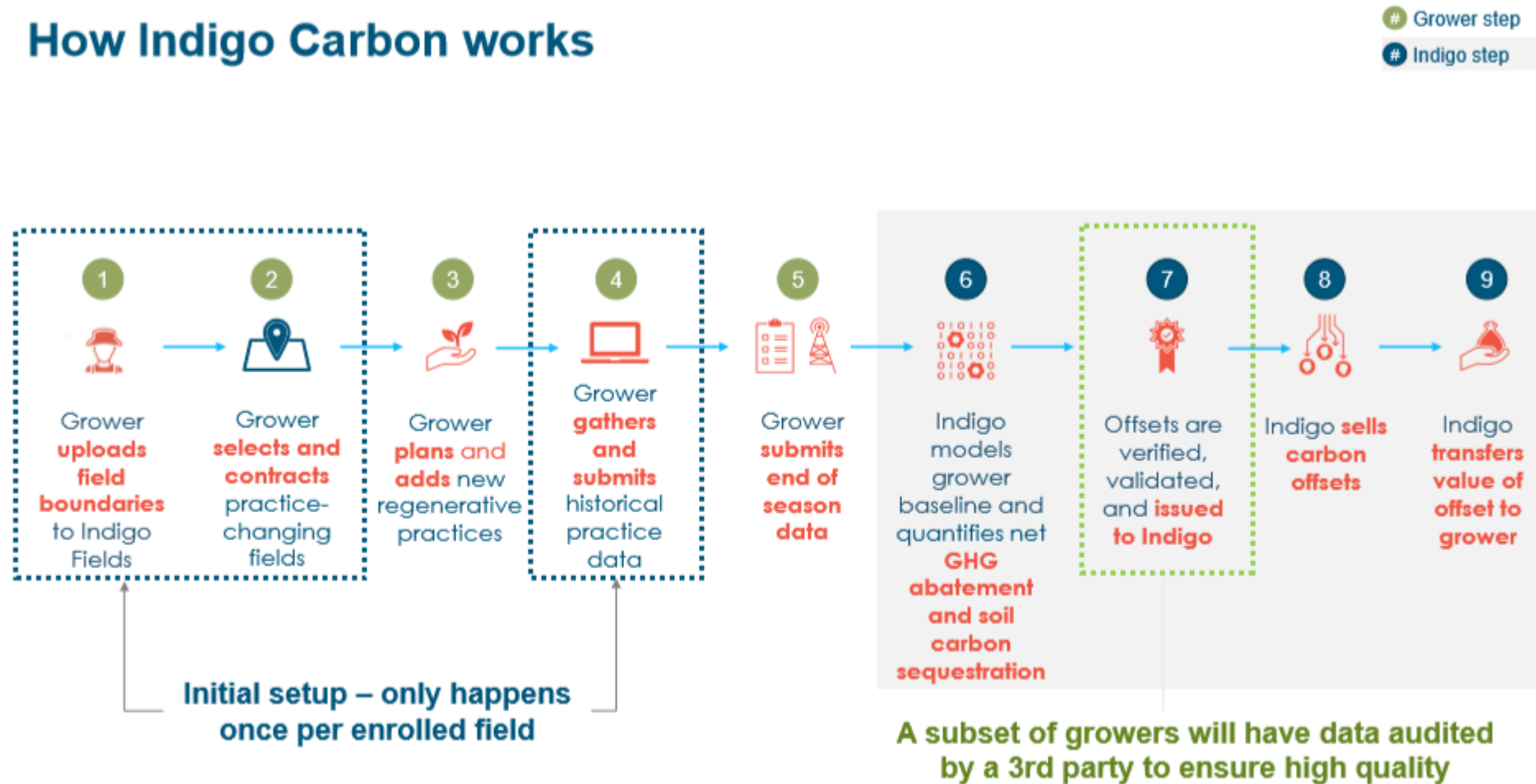


**Incorporate  
livestock /  
grazing**



# Carbon Farming on mineral soils – example set-up Indigo Carbon

## How Indigo Carbon works



# Earth Observation in the service of Carbon Farming

## Monitoring C farming and ecosystem types

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- Make the case, and specify needs for CLC+ development process
- Analyse usability of current HRL products, and refinements of CLC monitoring (e.g. change manual 2012), refinements of HRL products (e.g. forest biomass derived from tree height and/or crown size)
- Utilize recommendations from feasibility studies: combined GIS analysis with LPIS (R&D), Mapping and Assessment of Ecosystems and their Services (MAES), others

# Carbon Farming – proof of different concepts

The way to sequester carbon is via regenerative farming practices

These 5 practices are proven to develop carbon enriched soils ...



Cover crops,  
esp. legumes



Reduced  
tillage



Longer crop  
rotations



Reduced  
synthetic  
inputs



Incorporate  
livestock /  
grazing

Paradigm shift for peatland use

**Alternative income options** needed

- Paludiculture: wetland crops + value chains
- Rewarding of emission reduction (e.g. public payment or appropriate credit schemes)



**Adjustments** of CAP framework

-> many paludicultures currently not eligible for CAP payments



## PROPOSED Fork to farm carbon credit system

Sources: Indigo, Jim McAdam, CUT, GMC





# Conclusions

- Carbon Farming to deliver on the EU 2050 climate neutrality vision, 2030 climate target plan
- Agriculture, forestry, land use sector towards climate neutrality in 2035
- EU Carbon Farming Guidelines to be put at work, refined via piloting under real farming conditions
- Improved knowledge and communication system to enable cost-efficient, larger scale uptake of Carbon Farming in development (LIFE PP)
- EU agricultural soil scientists (EJP SOIL), EO community (EEA+) in action to further facilitate Carbon Farming coverage, design and implementation