EUROPEAN UNION

EUROPEAN MISSION SOIL WEEK

Breakout Session

Soil health for climate

21 November 2023, 14:00-16:00

#MissionSoilWeek #MissionSoil #EUMissions

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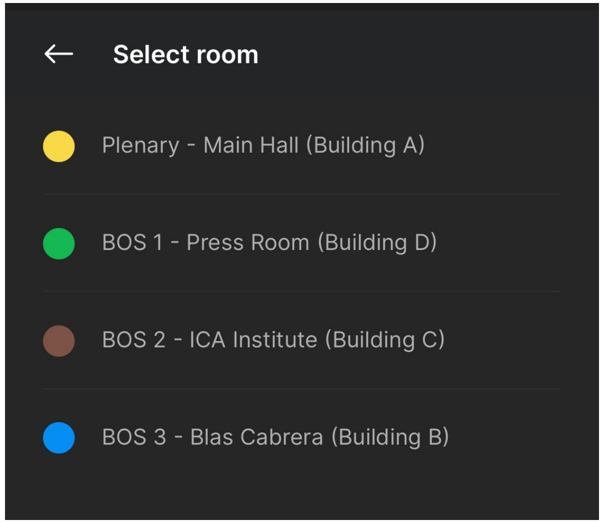
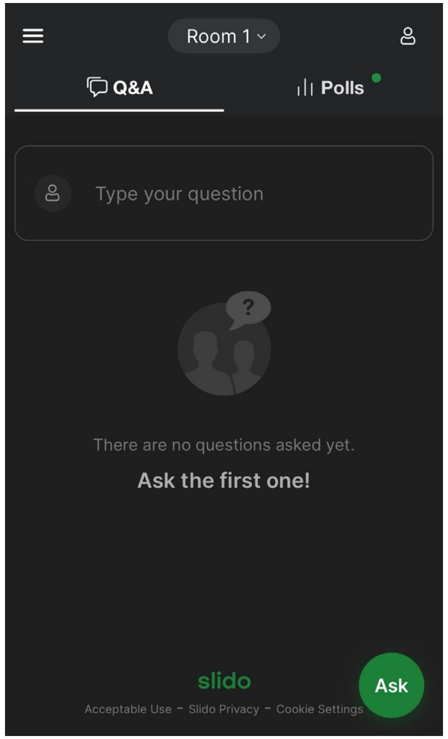
Housekeeping rules

- **WIFI**
  - Network : EMSW
  - Password : np9dpL9Y$8CS7v%

- **Questions**
  - Go to www.sli.do and enter event code **#ESMW2023** (or scan the QR code)
  - Select the ‘room’ of the session
  - Submit your questions





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Moderator

Anna Besse-Lototskaya

Co-coordinator of the EU-co-funded programme EJP SOIL

Wageningen University & Research

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Agenda

Presentations (moderator: Anna Besse-Lototskaya)

- Claire Chenu: *The contribution of soil organic matter to soil health*
- Marta Goberna: *Trade-offs between carbon sequestration, greenhouse gas emissions and nutrient losses*
- Martin H. Thorsøe: *How do existing carbon farming schemes account for synergies and trade-offs?*
- Input from the audience: *Slido*
- Saskia Visser: *Diversifying incomes through a comprehensive carbon farming/ nature credit framework*

Panel discussion (moderator: Claire Chenu)

- Tristano Bacchetti De Gregoris, Cristiano Ballabio, Christian Holzleitner, Saskia Visser: *How to develop carbon farming schemes that account for synergies and trade-offs*
- Summary of inputs

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Our speakers

Martin Thorsøe

Coordinator of the EU-co-funded project Road4schemes

Aarhus University

Saskia Visser

Cluster manager

Resilient and climate neutral regions at Climate - KIC

Marta Goberna

Coordinator

EU-co-funded project TRACE-Soils

Claire Chenu

Senior scientist and Coordinator of the EU co-funded programme EJP SOIL

INRAE (French National Research Institute for Agriculture, Food and Environment)

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The contribution of soil organic matter to soil health

Claire Chenu

INRAE, France

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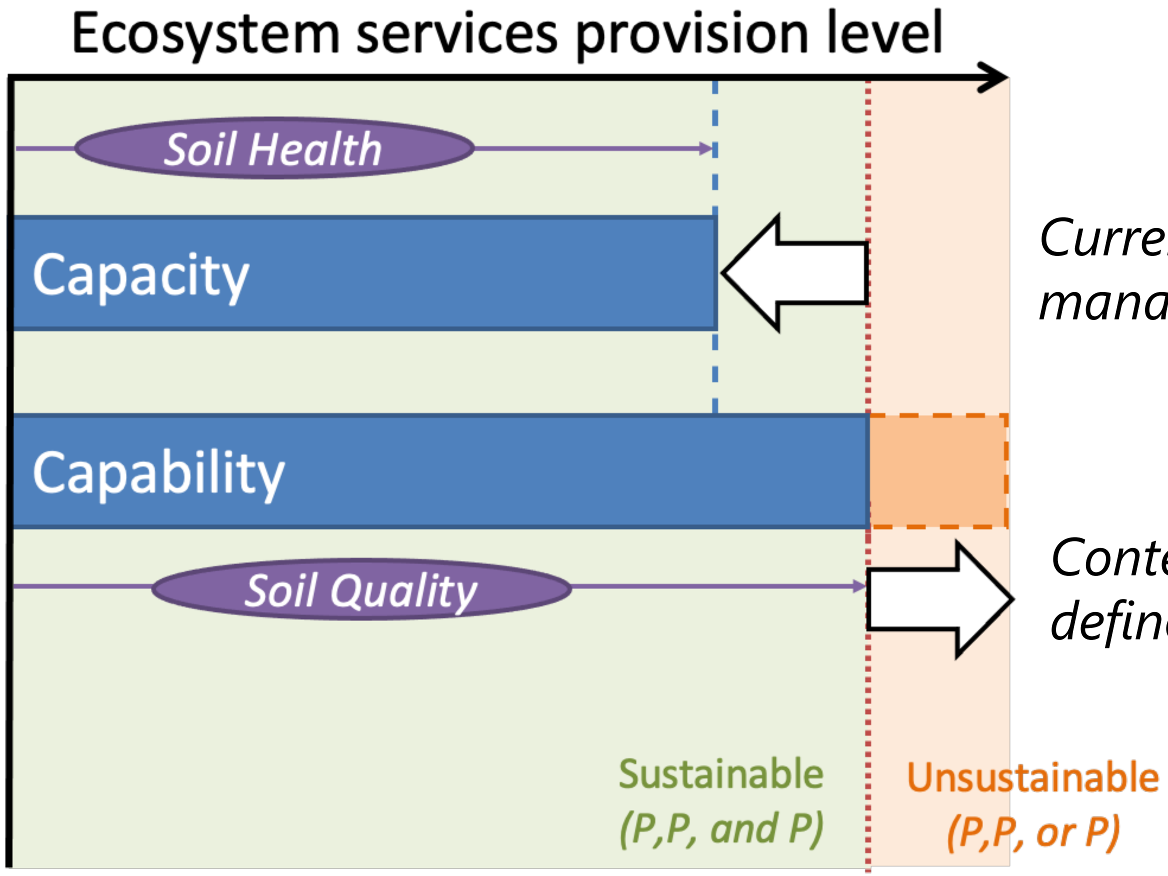
Soil health is the actual capacity of soils to provide ecosystem services



Doran et al. 1994
Veerman et al. 2020
Faber et al. 2021

Current soil status and ecosystem management limits provision of ecosystem services

Context properties (e.g., soil type and land use) define potential at sustainable use

Land use sustainability in terms of people, planet, profit (P,P,P)

EJP SOIL
European Joint Programme

Faber et al. 2021
https://ejpsoil.eu/fileadmin/projects/ejpsoil/Policy_briefs/SIREN/SIREN_Policy_brief.pdf

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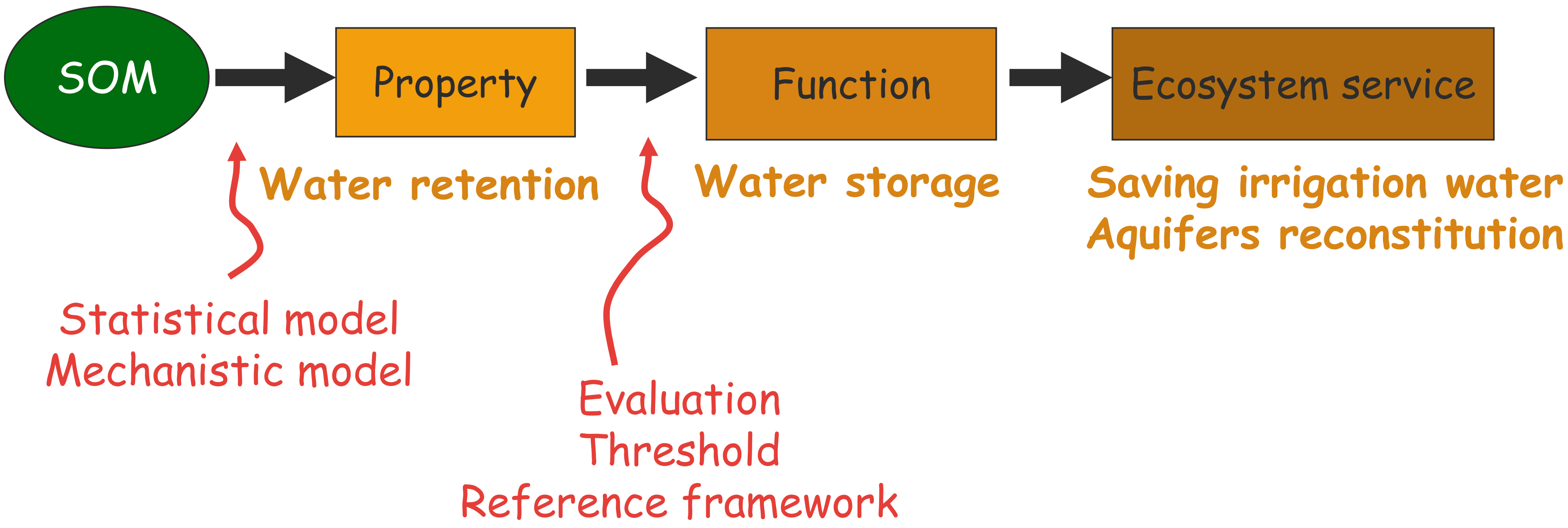
Quantitative relationships : from properties to functions and ecosystem services



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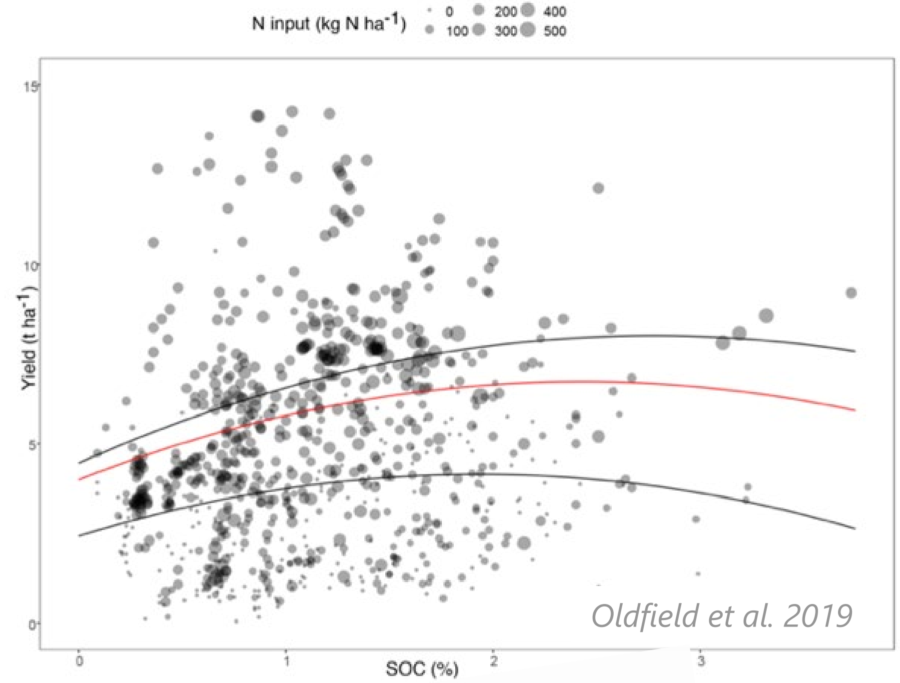
Supporting primary productivity: yields



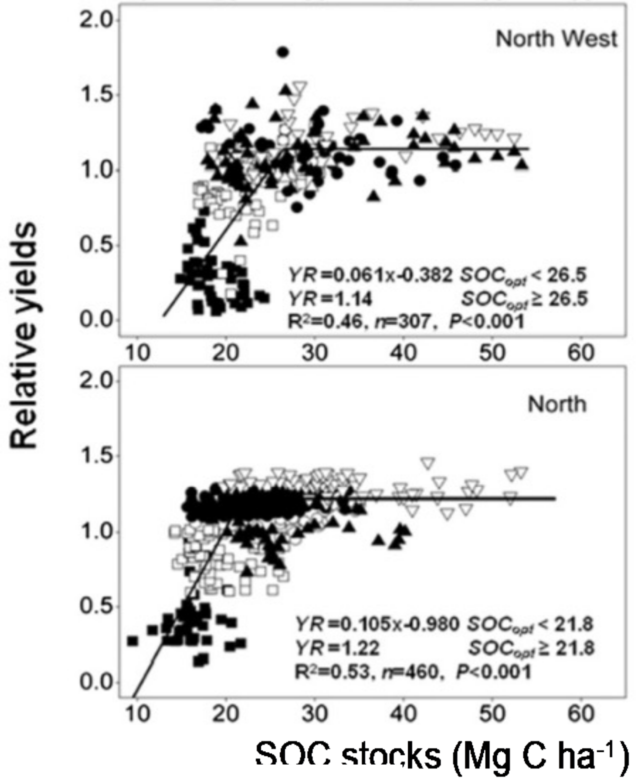
Oldfield et al. 2019

Nutr Cycl Agroecosyst (2020) 118:325–334
https://doi.org/10.1007/s10705-020-10098-2

ORIGINAL ARTICLE

European survey shows poor association between soil organic matter and crop yields

Wytse J. Vonk · Martin K. van Ittersum · Pytrik Reidsma · Laura Zavattaro · Luca Bechini · Gema Guzmán · Annette Pronk · Heide Spiegel · Horst H. Steinmann · Greet Ruysschaert · Renske Hijbeek



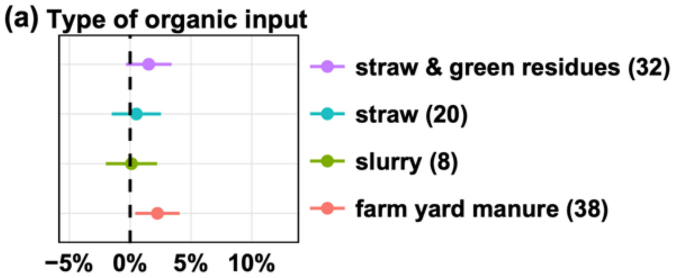
Zhang et al. 2016

Plant Soil (2017) 411:293–303
DOI 10.1007/s11104-016-3031-x

REGULAR ARTICLE

Do organic inputs matter – a meta-analysis of additional yield effects for arable crops in Europe

R. Hijbeek · M.K. van Ittersum · H.F.M. ten Berge · G. Gort · H. Spiegel · A.P. Whitmore



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Soil organic matter effects and associated benefits

Property or process	Static (S) or dynamic (D) effect	Effect on soil properties	Benefit	predictive tool for property?	Soils most concerned
Chemical properties					
Increase in CEC	S	↗ NH_4^+, K, Ca, Mg, Fe retention	↗ plant mineral nutrition	PTF	Sandy soils
		↗ resistance to erosion	↘ erosion	model	
		↗ available water	↗ water available for plants	PTF	Sandy, stony and thin soils
Porosity increase	S	↗water infiltration	↘ runoff and P and pesticide losses ↘ erosion ↗ water available for plants ↗ replenishment of water reserves (blue water)	PTF	Silty crusting soils, clayey soils
		↘penetration resistance	↘ mechanical energy to work soils		Clayey soils
Mulch at the soil surface	S	↘evaporation	↗ water available for plants ↗ replenishment of water reserves (blue water)		Sandy soils
		↘runoff	↘ erosion	model	Silty crusting soils, slope soils
Darker color of soil	S	↗ rapid soil warming	earlier seedling emergence	model	
Biological properties and processes					
Mineralisation of N, P, S	D	↗ available nutrients	↗ plant mineral nutrition	model	All soils
		↗ nitrates in solution	↘ water quality	model	All soils
Mineralisation of C and N	D	↗ SOM stabilisation	↗ C storage	model	All soils
		↗ N_2O and methane emissions	↗ GHG emissions	model	Hydromorphic soils
Trophic resource for organisms. Increased abundance and diversity of soil biota	D	↗ abundance and biodiversity of soil biota	↗ soil resilience	-	All soils
		↗ symbiots and PGPR	↗ crop growth	-	
		↗ regulating pathogens and pests	↗ crop sanitary quality	-	All soils
		↗ biodegradation of organic contaminants	↗ water quality, food quality	-	All soils

$$CEC = 0.037\ clay_{g/kg} + 0.273\ Corg_{g/kg}$$ *Bigorre et al. 2000*

$$CEC = 1.24 + 0.058\ clay_{g/kg} + 0.466\ Corg_{g/kg}$$ *Krogh et al. 2000*

$$CEC = 0.062\ clay_{g/kg} + 0.295\ Corg_{g/kg} + \Delta OC\ charge(pH8.1 - soil\ pH)$$ *Van Erp et al. 2001*

Chenu et al. in Pellerin & Bamière, 2017. INRAE 4p1000 expert assessment

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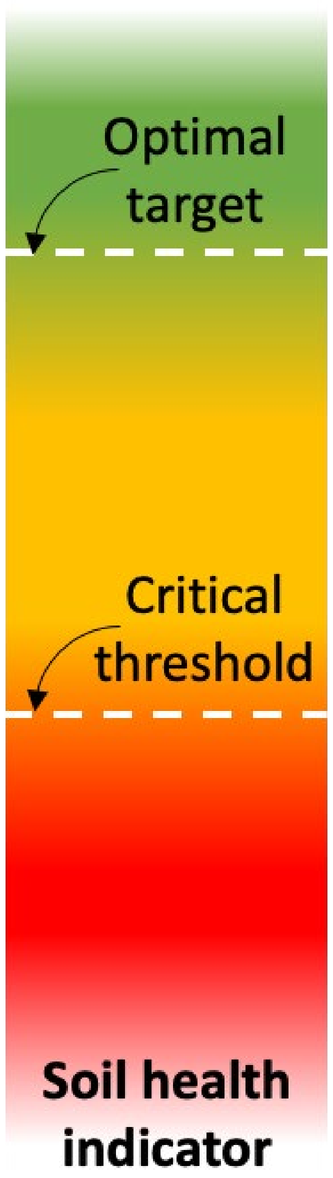
Setting SOM critical values



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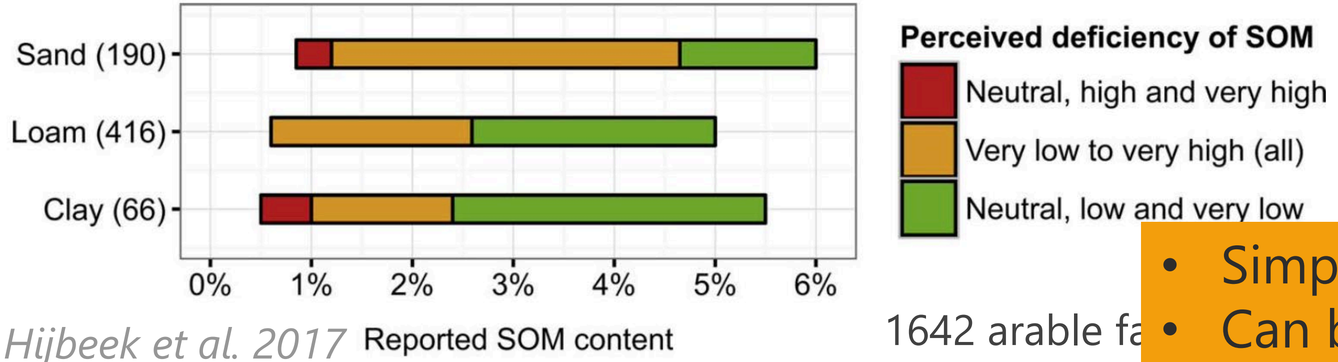
1- Fixed critical values

Table 2.5 Matrix of mean SOC minimum and maximum thresholds for cropland soils (% soil mass)

Soil texture class	Climatic water balance (mm) summer: Less than -100		-100 to 0		More than 0	
	Min.	Max.	Min.	Max.	Min.	Max.
Sand	0.5	1.23	0.9	1.73	1.2	2.23
Silt	1.5	2.53	1.0	2.07	0.8	1.59
Loam and clay	0.6	1.47	0.9	1.92	1.9	3.23

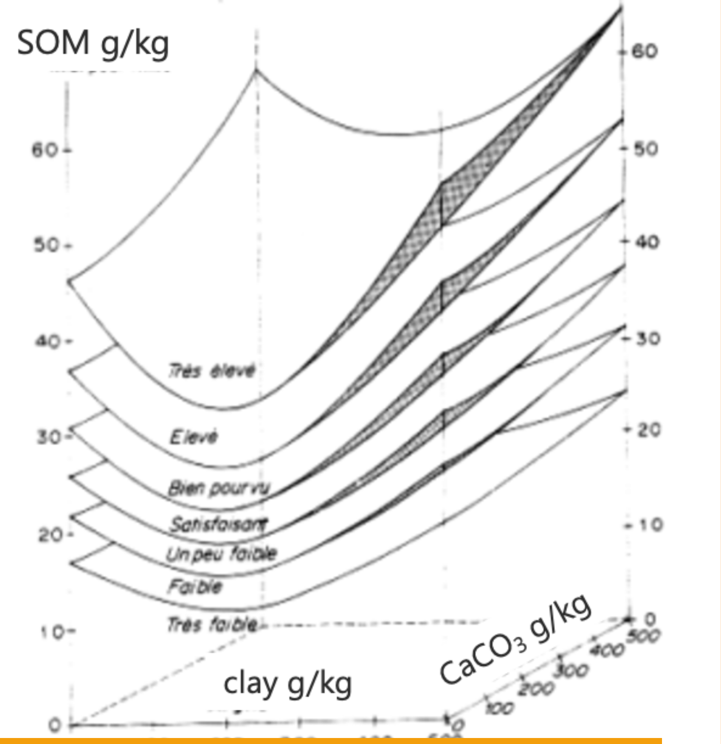
Source: Compiled from Wessolek et al. (2008).

Wessolek et al. 2008 in Baritz et al. EEA report 2023



Hijbeek et al. 2017

1642 arable fa



973

- Simple
- Can be linked to functions
- Requires context specific references
- Available knowledge?

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Matson et al. submitted

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2- Critical values relative to "natural" land uses

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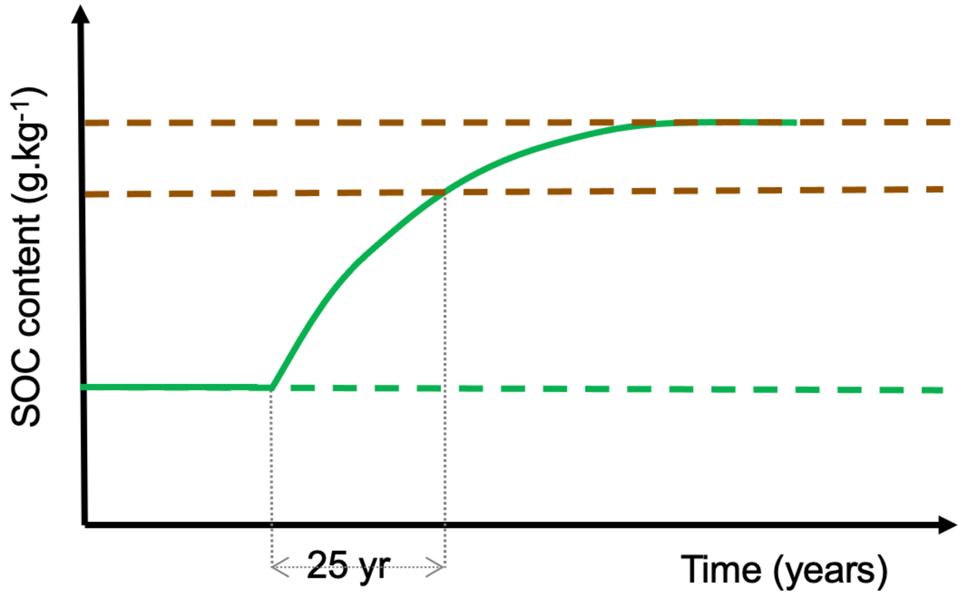

Adapted from *Sparling et al. 2003*

- Simple
- Not linked to functions
- Needs to be context specific
- "Natural" references available?

EJP SOIL European Joint Programme

Matson et al. submitted

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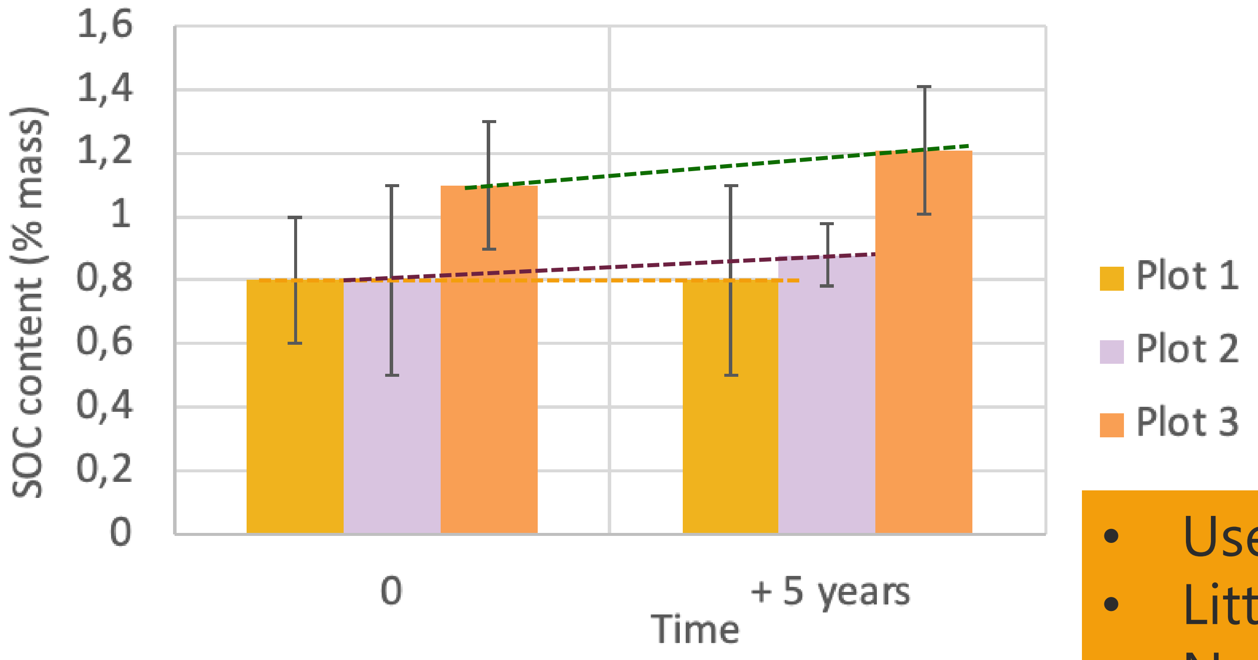
3- Critical values based on relative changes



- Uses current values
- Little knowledge & stratification required
- Not linked to soil functions
- Which desired/measurable % improvement
- What about pioneers ?

EJP SOIL European Joint Programme

Matson et al. submitted

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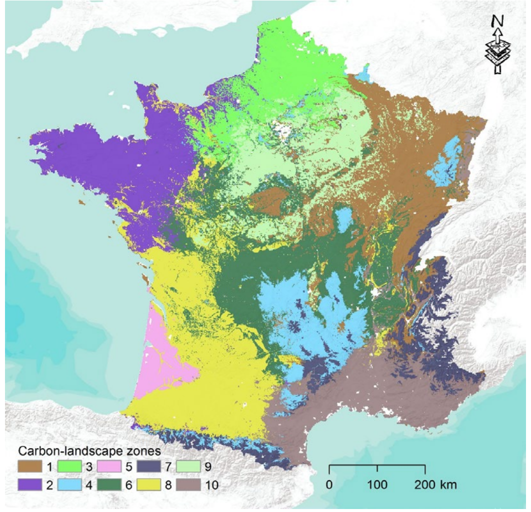
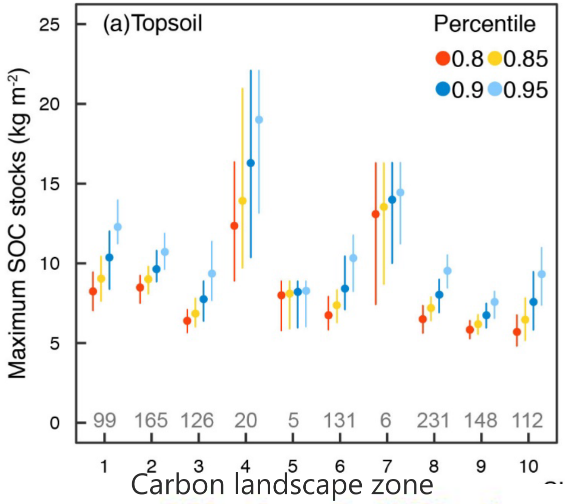
4- Critical values based on existing distribution of the indicator values

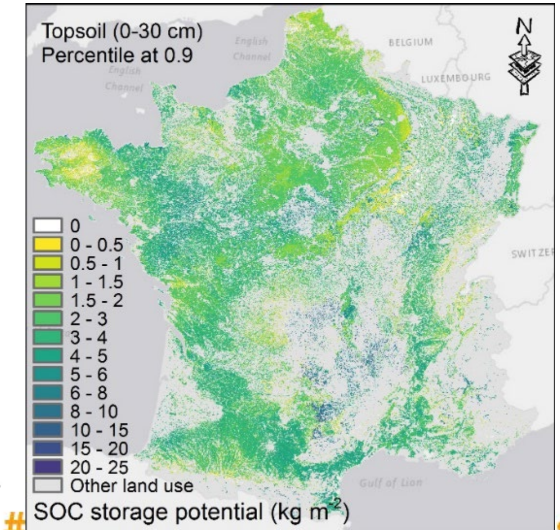
	SOC stocks for 0-20 cm layer (Mg C. ha^{-1})	
	Target value	Threshold value
Soil order	Median C content long term pasture	Lower quartile
Recent	72	54
Granular	88	78
Melanic	98	74
Allophanic	132	103

Sparling et al. 2003



Chen et al. 2019 Stoten





- Not linked to functions
- Requires extensive data
- How to set critical values?

Matson et al. submitted

Conclusion: The contribution of soil organic matter to soil health

- Central role of soil organic matter.
- Soil health: several ecosystem services. Tradeoffs.
- Need for quantitative information to sustain decision- support tools. Context-specific. Synthesis.
- Different approaches are available to set SOM critical values.

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EJP SOIL work on critical values for indicators: A. Bispo, C. Calzolari, I. Cousin, J. Faber, M. Fantappie, R. Hessel, S. Mocalli, A. Matson, F. van Egmond et al.

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Thank you!

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EJP SOIL has received funding from the European Union's Horizon 2020 research and innovation programme: Grant agreement No 862695

@EUAgri @EUAgri @EUgreenresearch @euagrifood European Research Executive Agency (REA)

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Trade-offs between carbon sequestration, greenhouse gas emissions and nutrient losses

Marta Goberna

Research scientist, INIA-CSIC

TRACE Soils
European Joint Programme

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CSIC CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

INIA Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria

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MANTAINING AND ENHANCING SOIL ORGANIC CARBON

REDUCING SOIL DISTURBANCE

DIVERSIFYING AGROECOSYSTEMS

INCREASING ORGANIC INPUTS

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MANTAINING AND ENHANCING SOIL ORGANIC CARBON

▶ **SYNERGIES**

- MAINTAINING SOIL STRUCTURE
- PRESERVING SOIL BIODIVERSITY

▶ **POTENTIAL TRADE-OFFs**

- INCREASING GHG EMISSIONS
- ENHANCING NUTRIENT LOSSES

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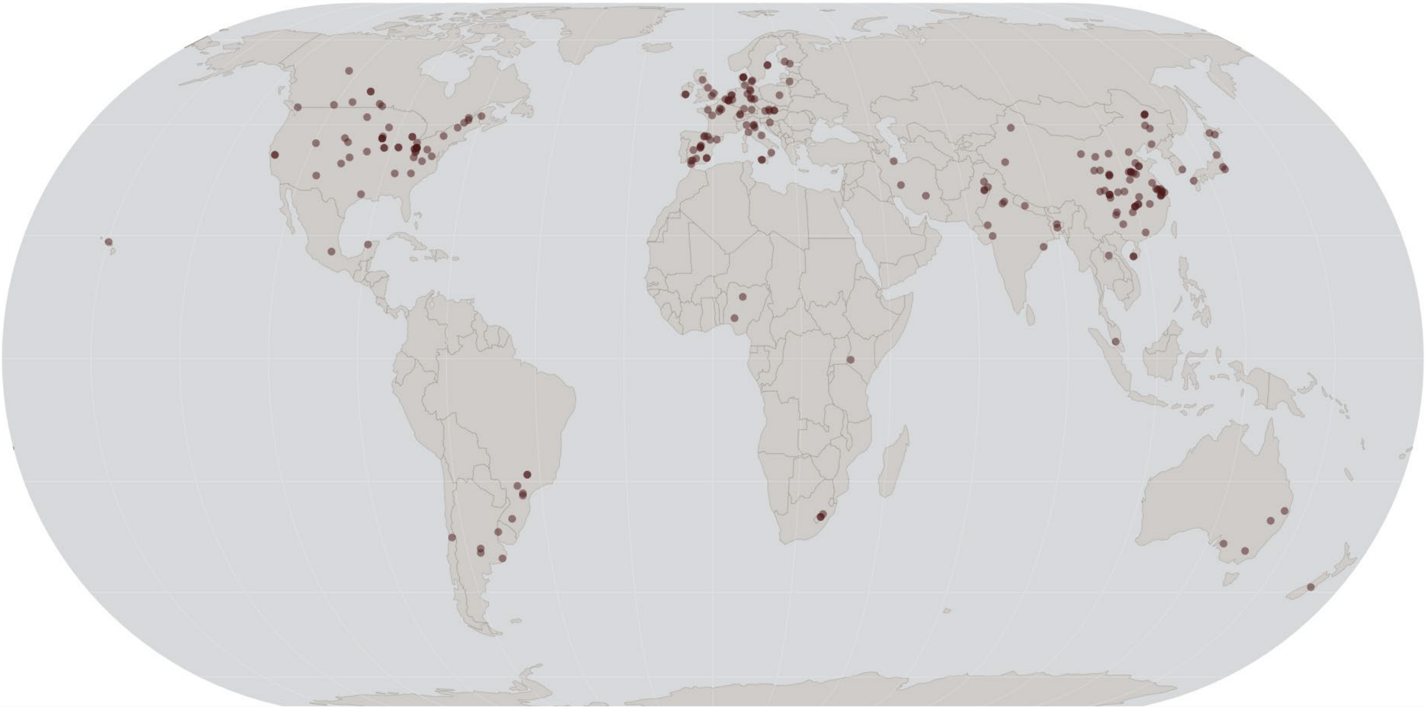
MANAGEMENT PRACTICES AND CARBON STORAGE



232 studies
215 sites
38 countries

NO TILLAGE STANDARD TILLAGE

Sánchez-Moreno, Goberna, et al. In preparation
Map built with Geo Point Plotter (D. Watkins)

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PRACTICES ARE NOT EQUALLY EFFICIENT

<

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CARBON STORAGE	DIVERSIFY AGROECOSYSTEMS	MINIMISE DISTURBANCE	INCREASE ORGANIC INPUTS
INCREASE	21	66	233
NEUTRAL	41	72	95
DECREASE	1	3	1
	N = 63	141	329

n: 200, 150, 100, 50

Sánchez-Moreno, Goberna, et al. In preparation

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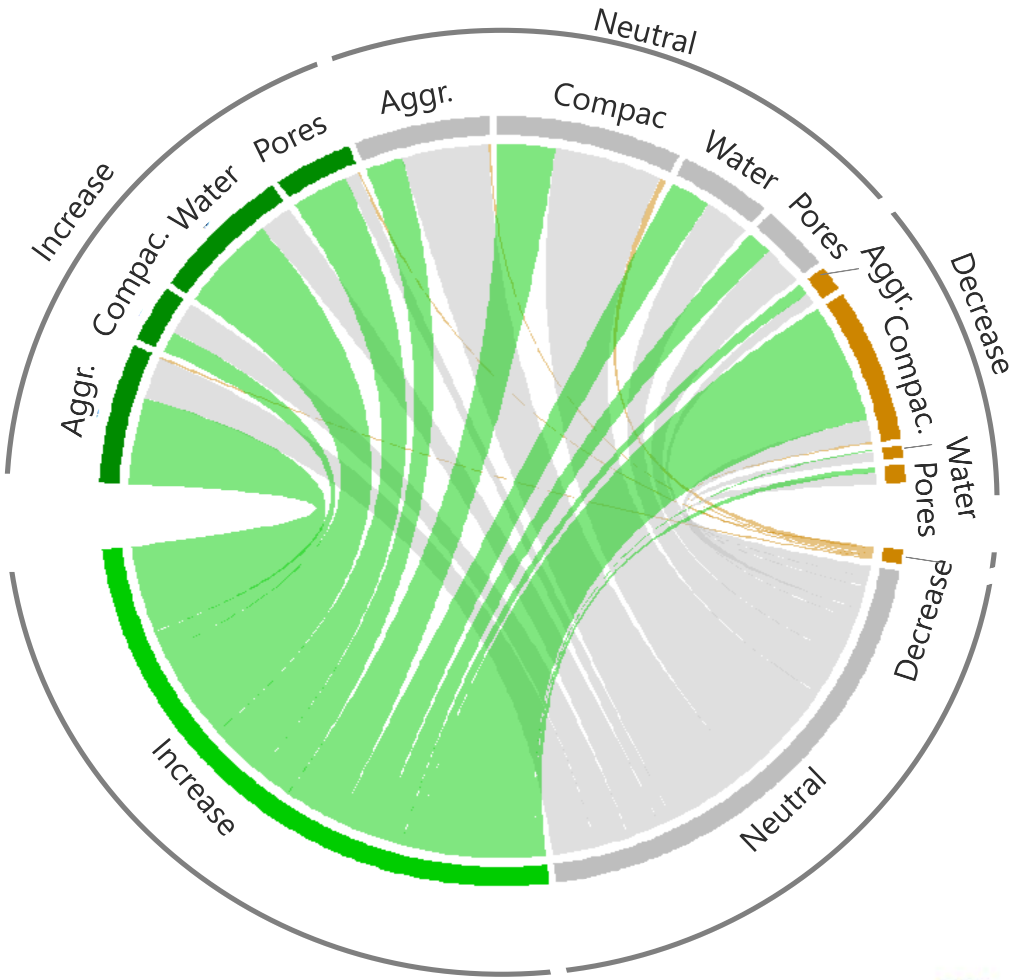
SYNERGIES WITH SOIL STRUCTURE AND BIOTA ARE EVIDENT

SOIL STRUCTURE

SOIL ORGANIC CARBON



- IMPROVED SOIL AGGREGATION
- INCREASED SOIL POROSITY
- ENHANCED WATER RETENTION
- REDUCTION OF SOIL COMPACTION
- ABUNDANT AND DIVERSE SOIL BIOTA

Sánchez-Moreno, Goberna, et al. In preparation

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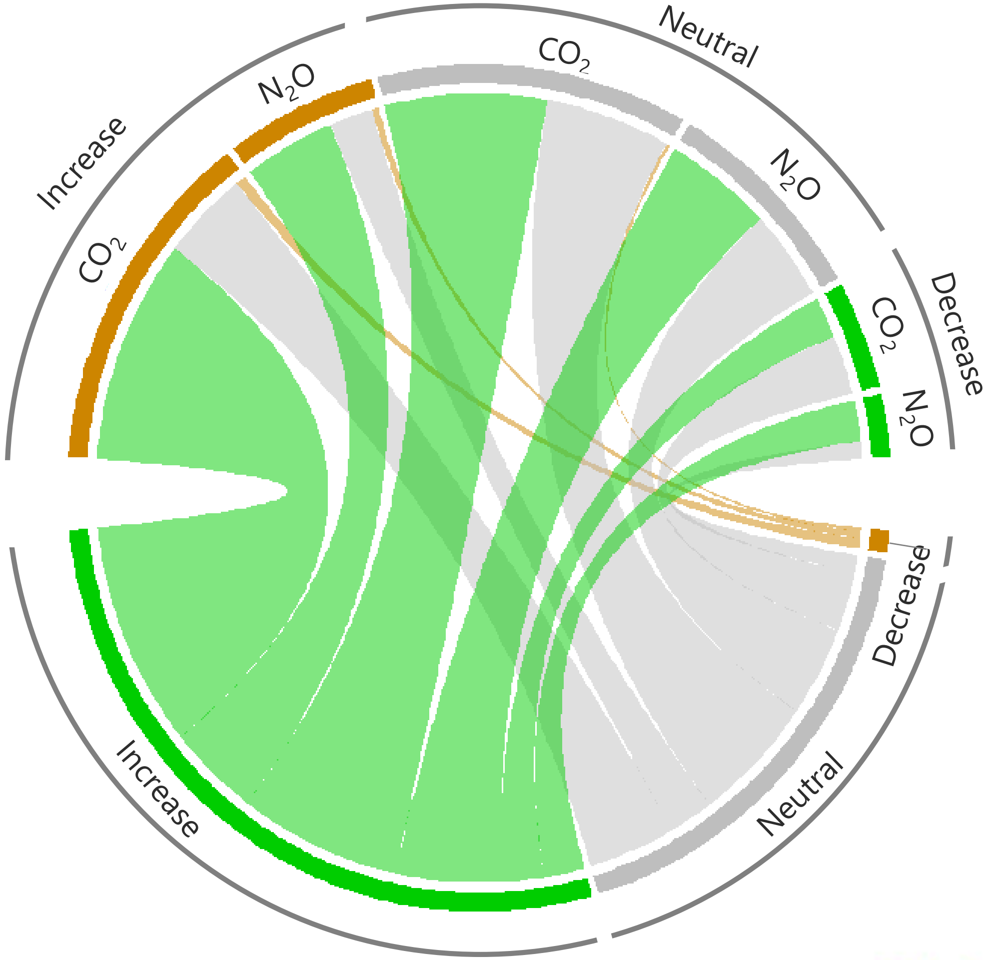
GREENHOUSE GAS EMISSIONS

GHG EMISSIONS

SOIL ORGANIC CARBON



- NOT SIGNIFICANT INCREASE IN CO_2 or N_2O

Sánchez-Moreno, Goberna, et al. In preparation

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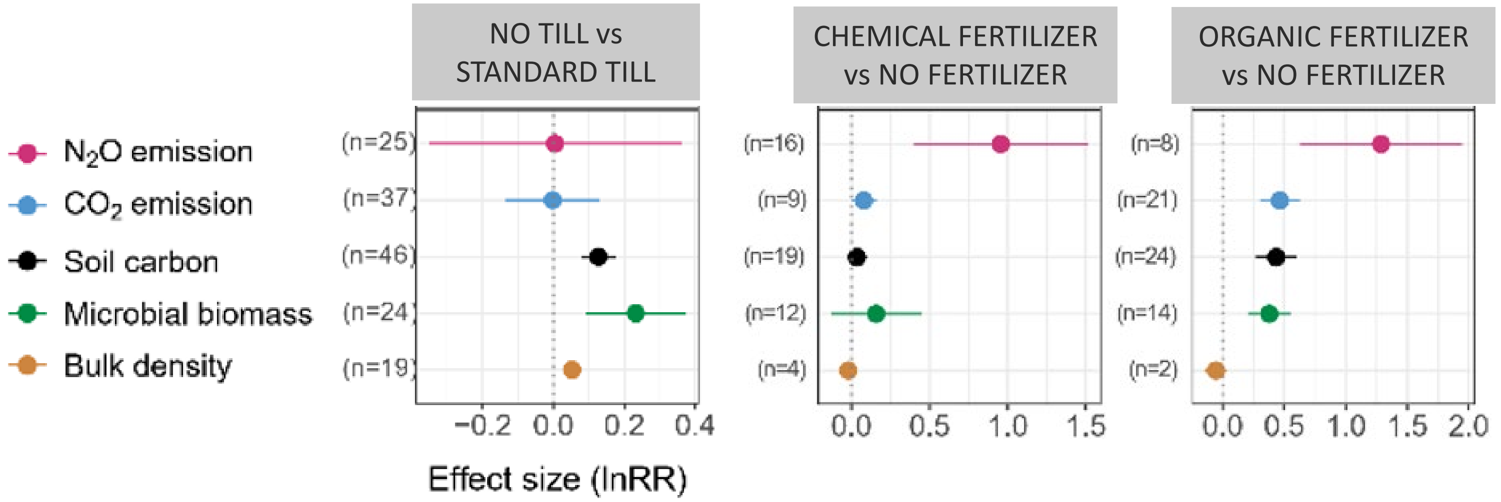
TRADE-OFFs MAINLY RELATE TO ORGANIC INPUTS



- ORGANICS SHOW SMALLER POTENTIAL TRADE-OFFs THAN CHEMICALS

N = 73 experiments

Worldwide

Juhanson, Hallin, et al. In preparation

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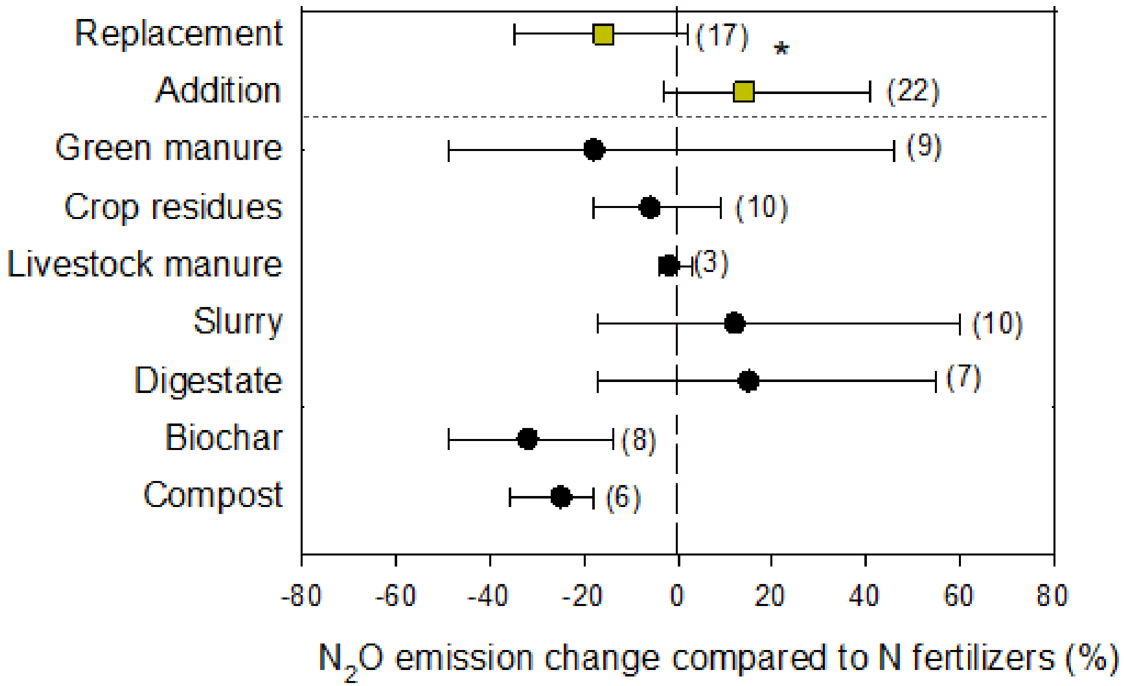
TRADE-OFFs MAINLY RELATE TO ORGANIC INPUTS



N = 53 experiments
Europe

- NOT ALL ORGANICS BEHAVE THE SAME
- BETTER LANDSPREADING ORGANICS ALONE THAN IN COMBINATION OF CHEMICALS

Valkama et al. Submitted for publication
Results of Sommit EJP Soil Project

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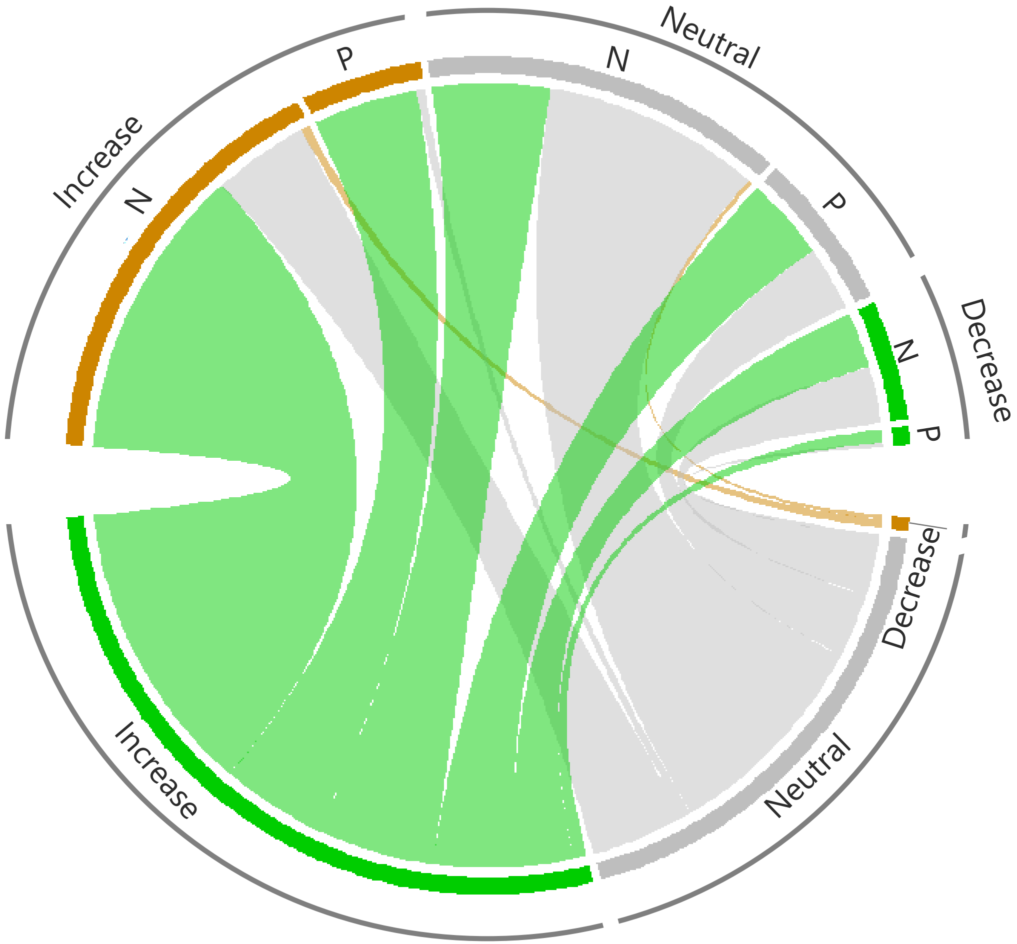
NUTRIENT LOSSES

SOIL NUTRIENTS

SOIL ORGANIC CARBON



- SIGNIFICANT INCREASE IN NUTRIENT CONTENTS
- INSUFFICIENT EXPERIMENTAL EVIDENCE ON NUTRIENT LOSSES

Sánchez-Moreno, Goberna, et al. In preparation

PRACTICES SHOW LARGE CONTEXT DEPENDENCY

3000 km transect

Tillage Experiments

>10 years

Cereals

Map: Metzger et al. 2005 GEB 14
Aerial photograph: INIA 1996

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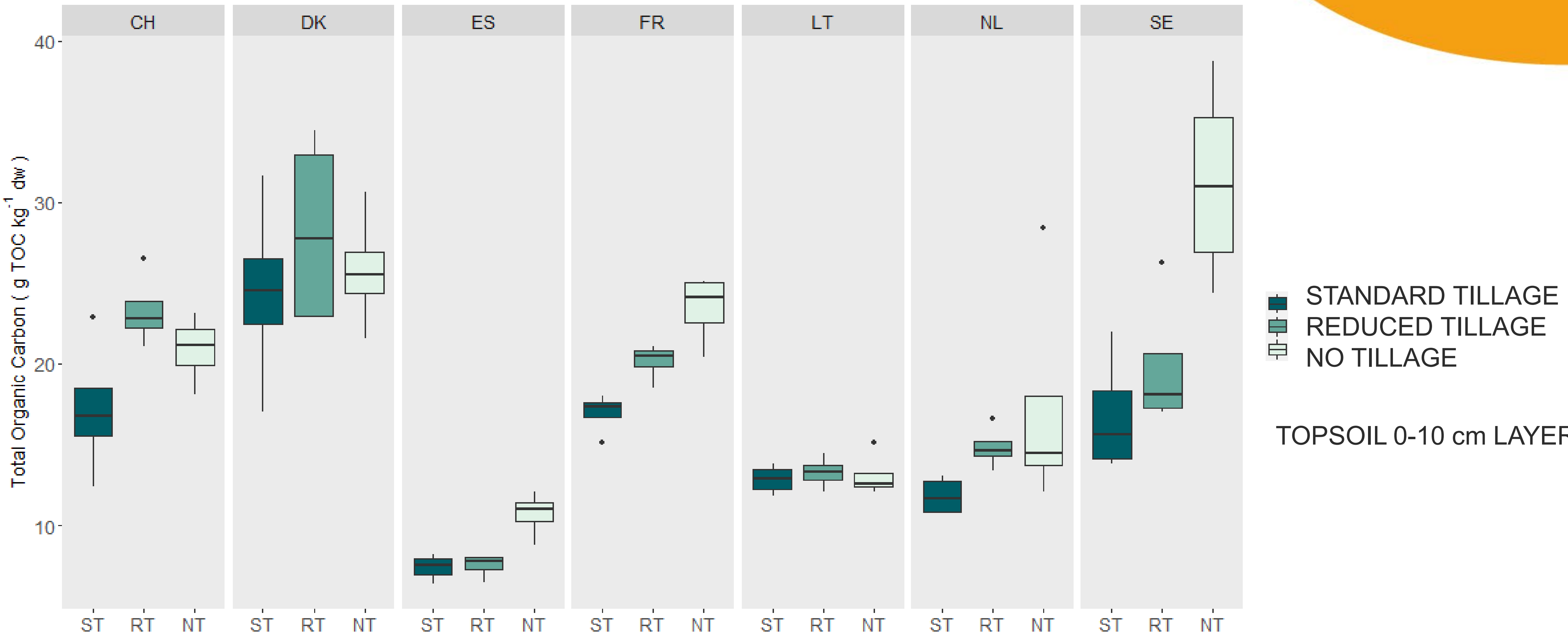
PRACTICES SHOW LARGE CONTEXT DEPENDENCY



TOPSOIL 0-10 cm LAYER

Goberna et al., In preparation

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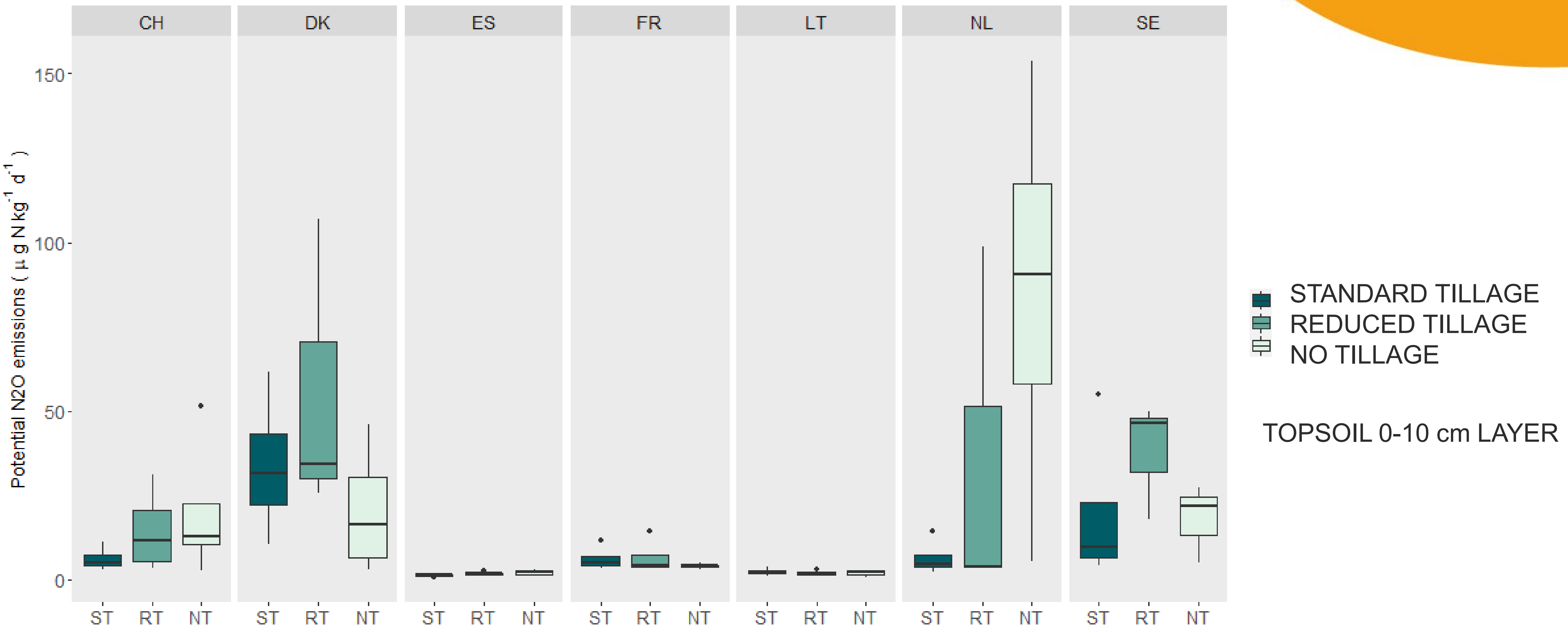
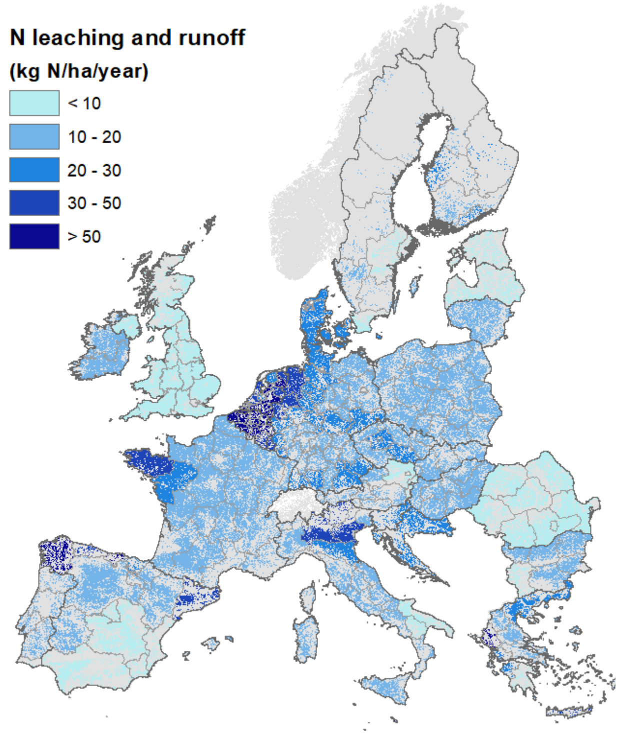
POTENTIAL TRADE-OFFs SHOW LARGE CONTEXT DEPENDENCY



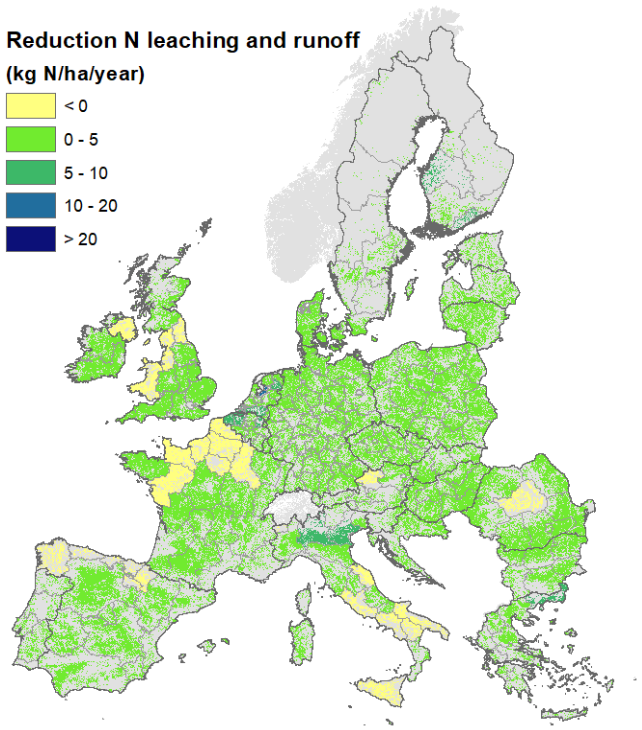
TOPSOIL 0-10 cm LAYER

Ros et al., In preparation

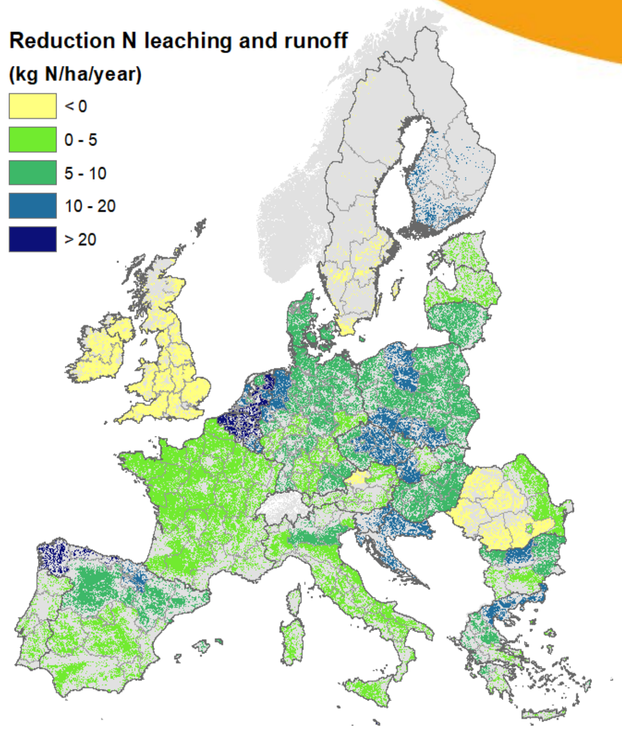
DATA GAPS HINDER MORE PRECISE MODEL PREDICTIONS



REFERENCE YEAR: 2017



COVER CROPS



COVER CROPS + BALANCED N FERTILIZATION

Ros, Velthof, Lesschen, et al. In preparation

MANTAINING AND ENHANCING SOIL ORGANIC CARBON

SHOW EVIDENT SYNERGIES WITH SOIL HEALTH

- REDUCING SOIL DISTURBANCE, DIVERSIFYING AGROECOSYSTEMS AND INCREASING ORGANIC INPUTS BENEFIT SOIL STRUCTURE AND BIOTA

DO NOT LEAD TO WIDESPREAD TRADE-OFFs

- TRADE-OFFs ARE MAINLY DUE TO THE USE OF SOME ORGANIC FERTILIZERS
- BETTER USE ORGANICS ALONE THAN IN COMBINATION WITH CHEMICAL FERTILIZERS

MORE PRECISE TRADE-OFF PREDICTIONS ARE NEEDED

- MULTI-SITE, SYSTEMATIC AND LONG-TERM FIELD MONITORING
- FILLING IN DATA GAPS ON FARM MANAGEMENT FOR MODELLING

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Thank you!

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VICEPRESIDENCIA TERCERA DEL GOBIERNO
MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA Y EL RETO DEMOGRÁFICO

Fundación Biodiversidad

PIMA adapta

oecc
Oficina Española de Cambio Climático

EJP SOIL has received funding from the European Union's Horizon 2020 research and innovation programme: Grant agreement No 862695

@EUAgri @EUAgri @EUgreenresearch @euagrifood European Research Executive Agency (REA)

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How do existing carbon farming schemes account for synergies and trade-offs?

Martin Hvarregaard Thorsøe

Assistant professor, Aarhus University

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Overview and objectives

Projects

EJP SOIL Road4Schemes

SoilValues

MARVIC MRV for carbon farming

Presentation objectives

1. Strengths and weaknesses of Carbon Farming scheme design options with respect to trade-offs and synergies

Input

1. Inventory of CF schemes (160)
2. In depth analysis (40)

Different scheme types and incentives

Activity based carbon farming: Payments for implementing defined carbon farming measures, independently of the resulting impact of those measures.

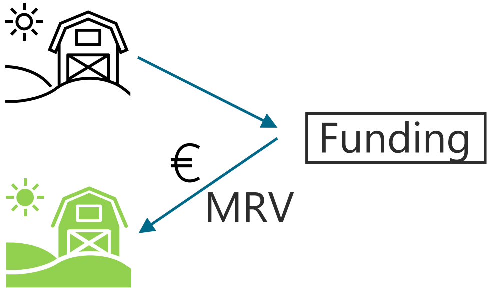
VS.

Result-based carbon farming: Payment for reducing net GHG fluxes from their land, whether that is by reducing their GHG emissions or by sequestering and storing carbon in soil. This requires a direct link between results delivered and payments.

Different design options

- **Purposive sampling:** (European coverage, maximum variation, should illustrate tradeoffs of scheme design)

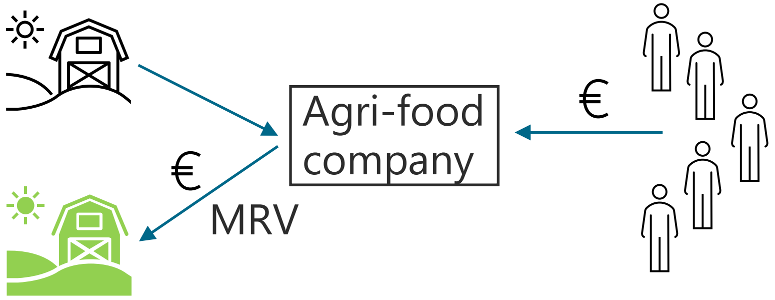
Farm payments



Examples

Sample size = 12

Corporate supply chain



Examples

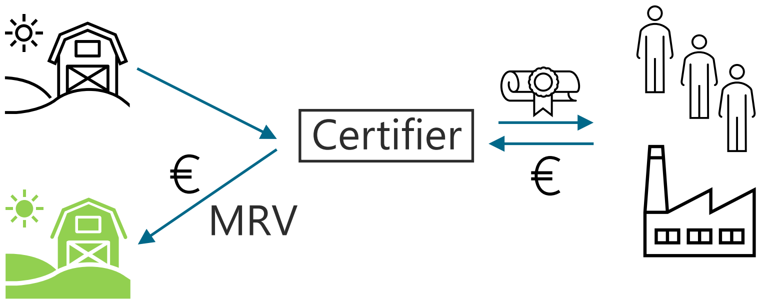
Arla

FrieslandCampina nourishing by nature

DIAGEO

Sample size = 7

Voluntary carbon markets



Examples

indigo

Agreena

VCS

LABEL BAS CARBONE

puro.earth

Moor Futures

Sample size = 17

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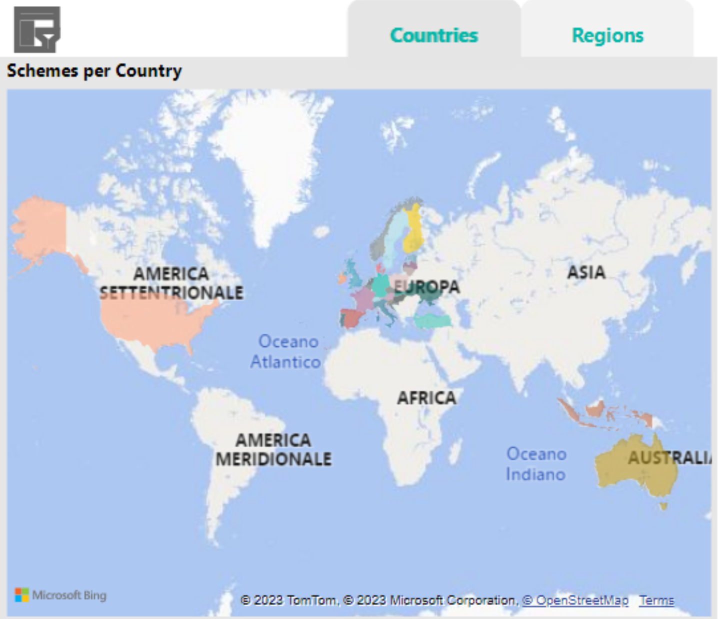
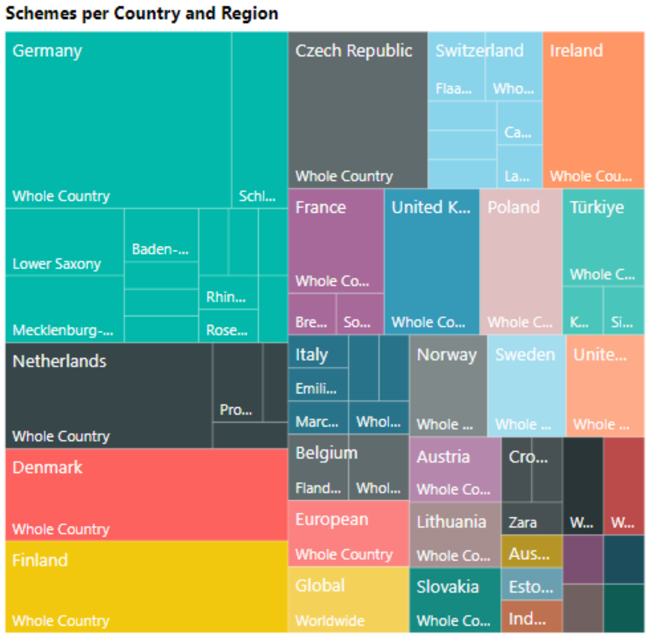
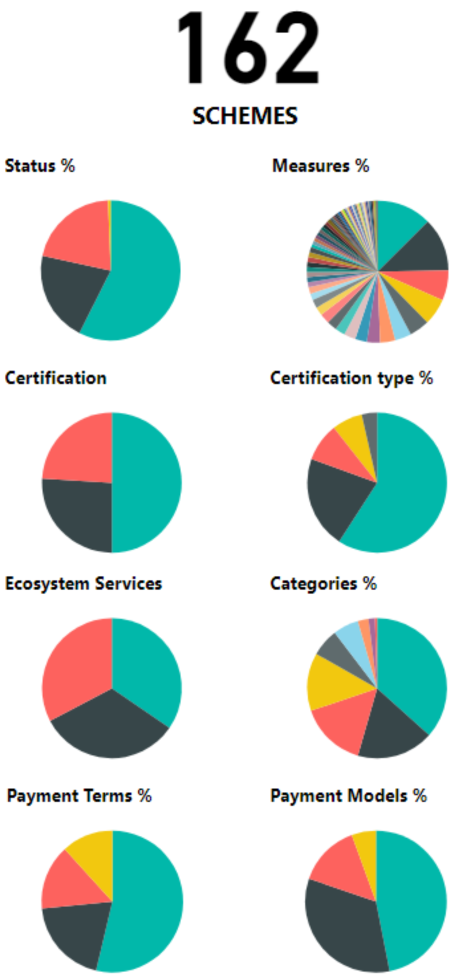
Web registry of CF schemes







ID_PROJECT	Name	COUNTRY	REGION	Contact	Email	Certification	Ecosystem Services
146		Lithuania	Whole Country		info@pelkiufondas.lt	null	null
35	Agrarisch Natuur- en landschapsbeheer	Netherlands	Whole Country			null	null
82	Agricoin	Germany	Whole Country			yes	null
97	Aktion Moorschutz	Germany	Lower Saxony			yes	null
99	ausgleichsagentur	Germany	Schleswig-Holstein			yes	null
6	Australia measurement protocol	Australia	Whole Country		Client Portal (cleanenergyregulator.gov.au)	yes	No
7	Bcarbon	United States	Whole Country		https://bcarbon.org/contact	yes	No
100	BetterClimate	Germany	Whole Country		muthke@betterclimate-company.de	yes	null
74	BobenOp e.V.	Germany	Schleswig-Holstein		christoph.thomsen@bobenop.de	no	No
58	bodenproben.ch / CarboCert	Switzerland	Whole Country		info@bodenproben.ch	yes	null
9	CAR Soils	United States	Whole Country			yes	No
83	CarboAgrar	Denmark	Whole Country			yes	null
103	CarboAgrar	Denmark	Whole Country			yes	null

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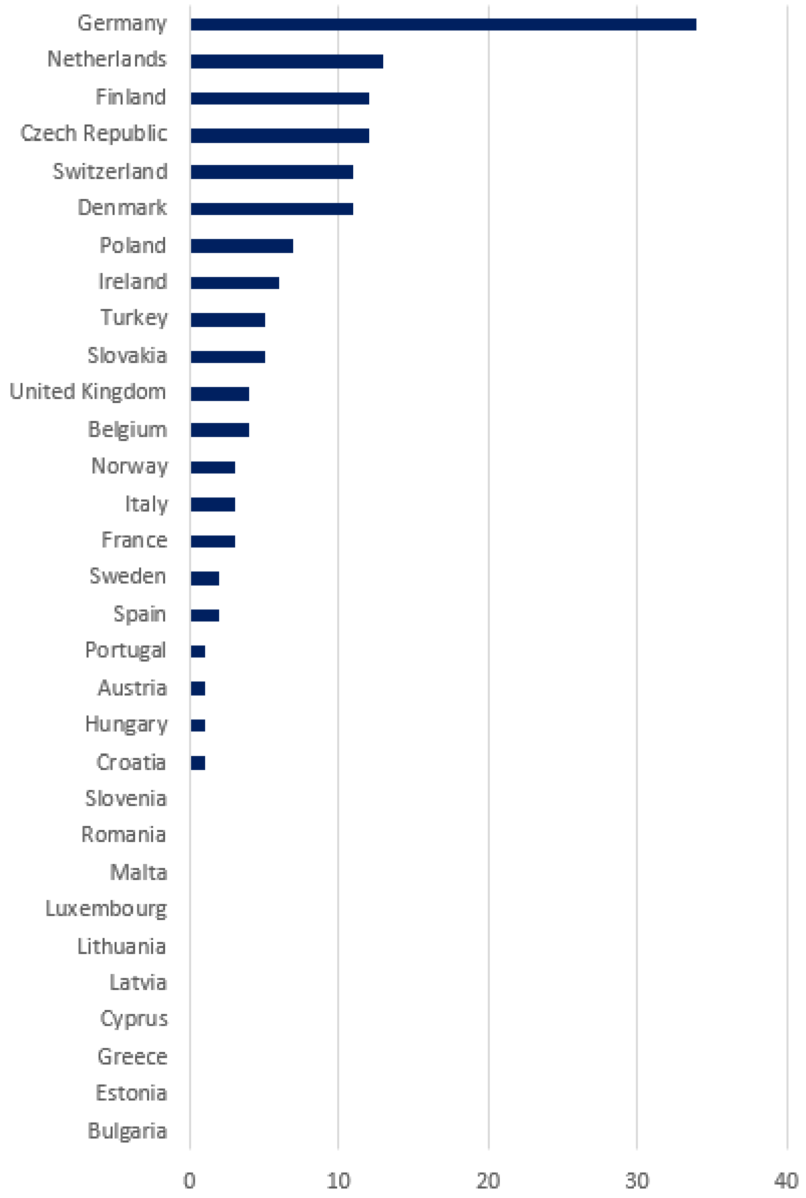
Measures and countries



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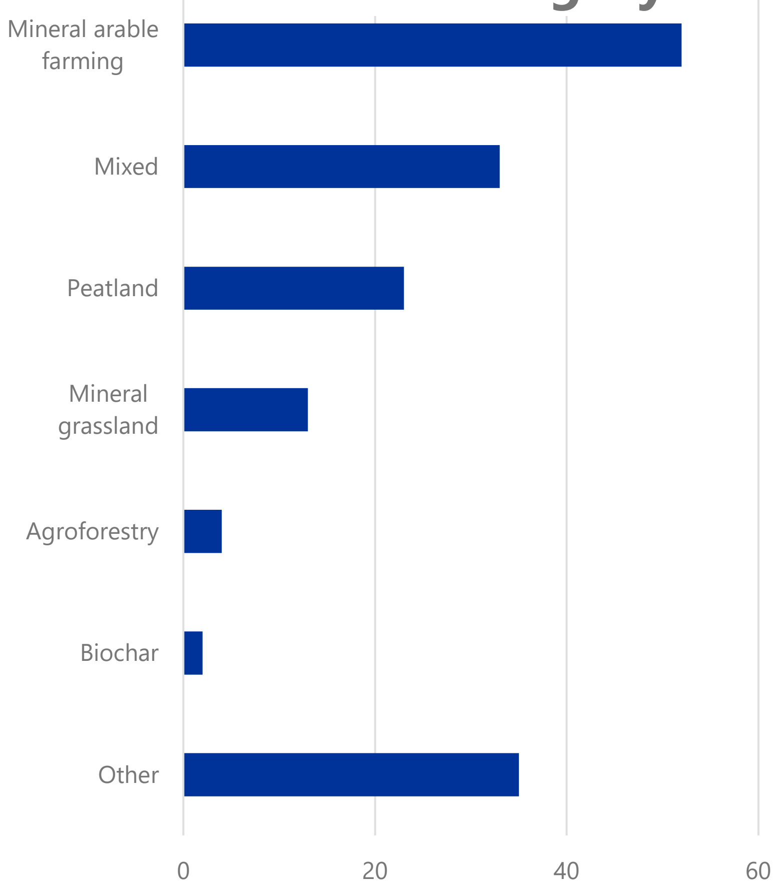
Measure category



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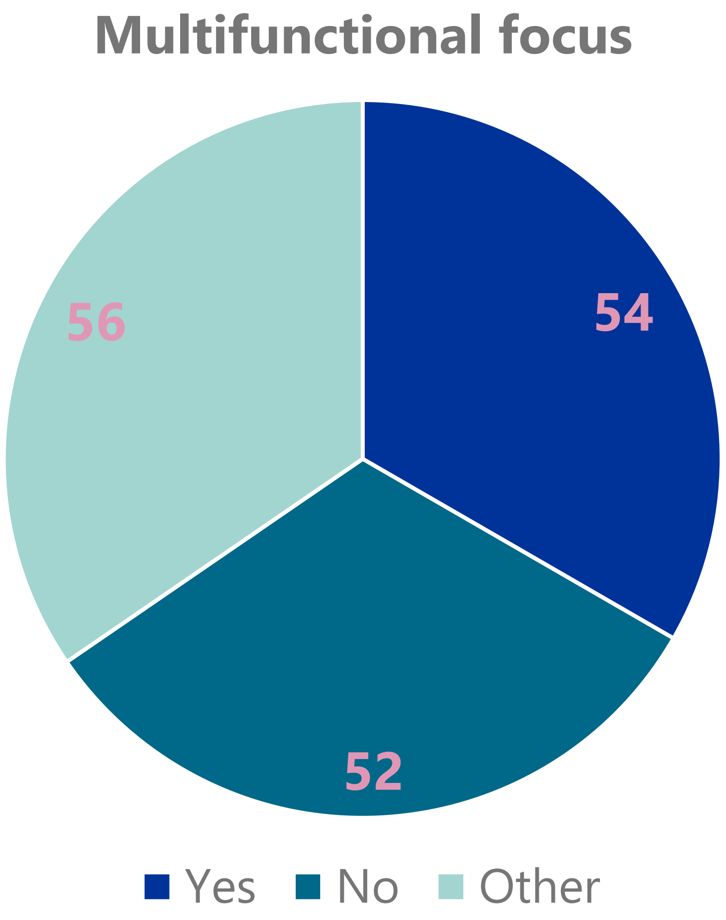
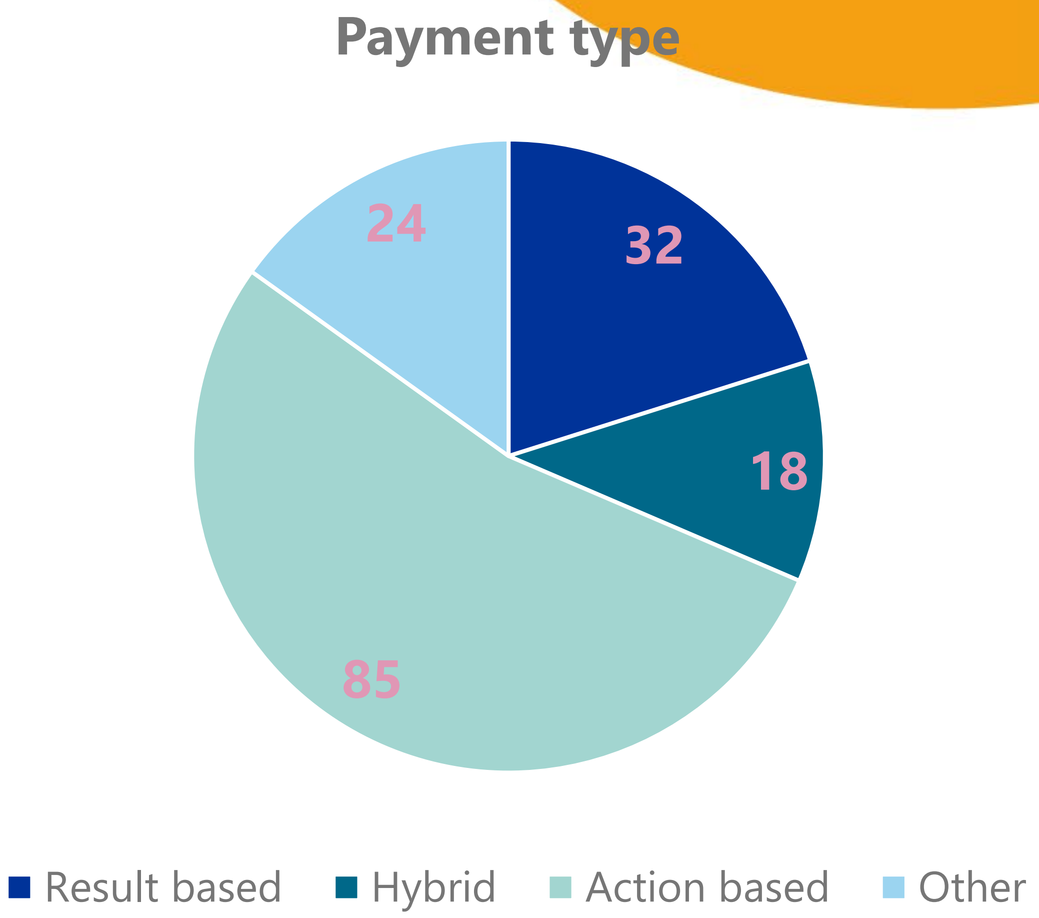
Payment type and scheme focus





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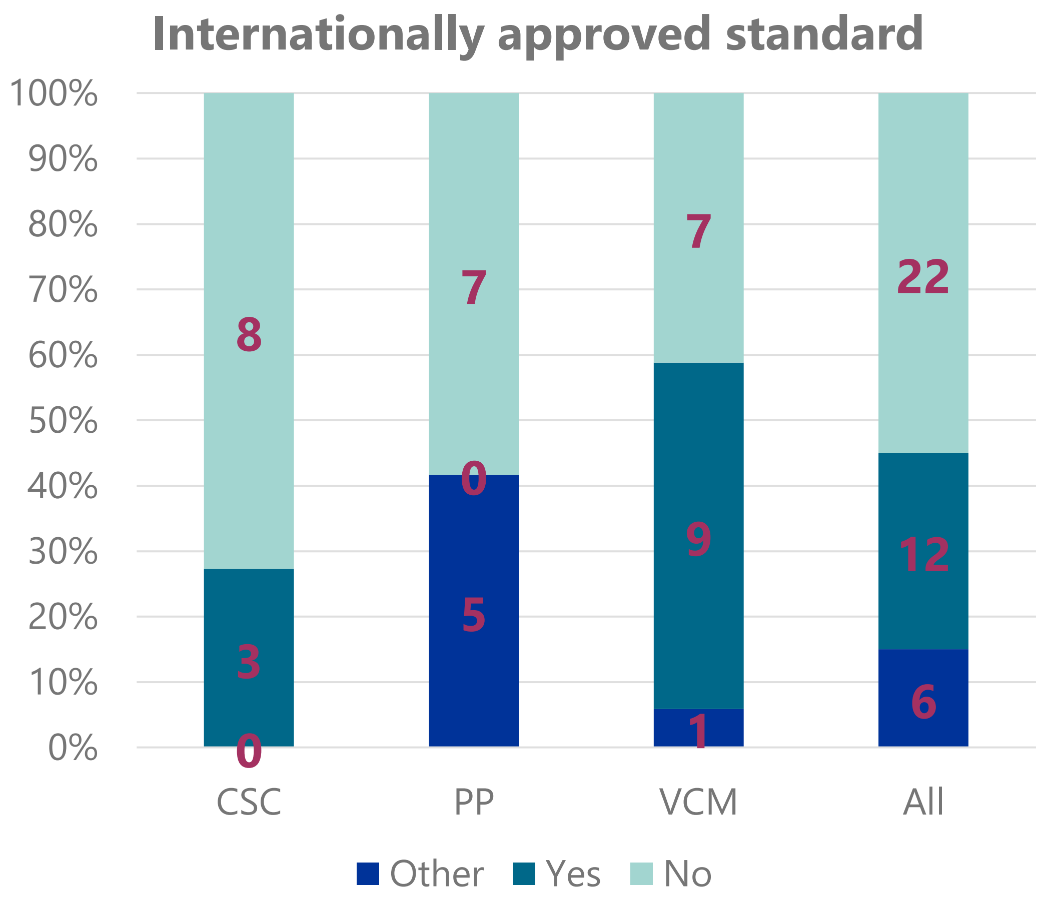
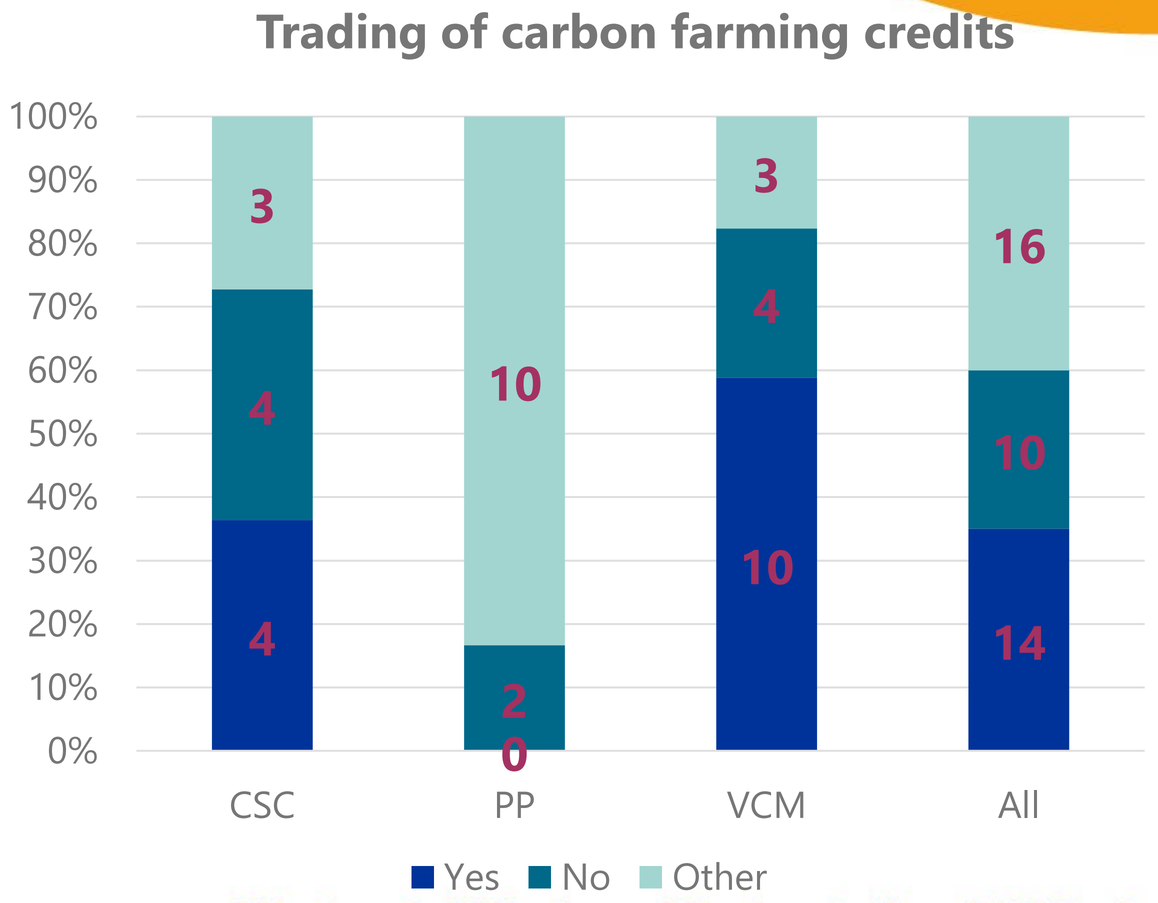
Payment type and scheme focus





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Synergies/tradeoffs and scheme scale

Scheme scale	Practices	Advantages	Shortcomings
Field scale	(CF) Changing crops, crop management, adding amendments field management	Direct incentives for SH adjusted to baseline	Monitoring costs and uncertainty and onfarm tradeoffs
Farm scale	Changing farm technology, stable systems and input/output on farm	Simple and flexible implementation and monitoring	Complex incentives and not always linked with performance
Collective schemes (Landscape)	Change land use, nature restoration & rewetting	Long-term landscape solutions	Resource consuming implementation

Concluding remarks (1)

Tradeoffs

- Accuracy vs. costs in MRV
- Percieved fairness due to local opportunities
- Field based approach to certification incur tradeoffs at farm and landscape scale
- Multifunctionality in schemes → + costs and complexity, which negatively influence uptake
- SOC vs GHG - Important to consider total GHG balance and dynamic effects
- Regulation at practice level

Synergies

- Farmers are quite interested in synergies, important to communicate benefits effectively
- Synergies are difficult to quantify and compare in CF schemes
- Not one silver bullet, but important to consider scheme mix

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Concluding remarks (2)

Certification of existing result based schemes

- No-harm implemented, but few schemes monitor relevant indicators or offer incentives for synergies
- Short term certification (often <10 years)
- Focus on additional sequestration, not maintenance of existing C stocks
- Farmers are interested in additional revenue, but dislike uncertainties of result based rewards

General reflections

- Competition beteween schemes and overall policy mix need to be considered
- Targeted and result oriented approach to agricultural support that focus on delivering societal goods
- Targeted use of activity based schemes could improve their use particular for multifunctional practices complementing result-based schemes

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Feedback and input from participants

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slido

Join at slido.com
#ESMW2023

ⓘ Start presenting to display the joining instructions on this slide.

slido

Audience Input

ⓘ Start presenting to display the audience questions on this slide.

slido

Which synergies are most relevant for including in MRV systems for carbon farming?

ⓘ Start presenting to display the poll results on this slide.

slido

Can you think of any practices that are "no regret" options which minimise trade-offs between carbon and other GHG and nutrient losses?

ⓘ Start presenting to display the poll results on this slide.

slido

At the current stage of knowledge about synergies and trade-offs associated with carbon sequestration in soils, what kind of approach would you recommend for carbon-farming schemes:

ⓘ Start presenting to display the poll results on this slide.

slido

Apart from those addressed in the presentations, are the any other potential synergies that deserve greater attention?

ⓘ Start presenting to display the poll results on this slide.

slido

Apart from those addressed in the presentations, are the any other potential trade-offs that deserve greater attention?

ⓘ Start presenting to display the poll results on this slide.

slido

What would be the most useful contribution(s) from Mission Soil towards creating synergistic carbon-farming schemes in the EU?

ⓘ Start presenting to display the poll results on this slide.

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Carbon farming or a nature credit framework?

=> what are stakeholder preferences

Saskia Visser

Climate-KIC

Thanks to Stewart Gee, Aleksandra Goldys, Ellea Lhermite

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Ireland – Ambition

Deep Demonstration
Sustainable food systems in Ireland

eit Climate-KIC
Co-funded by the European Union

"Ireland wants to become a world leader in sustainable food systems, leveraging its innovative agri-food sector to meet the highest standards of sustainability – economic, environmental and social…"

Some Critical 2030 Targets

- **25% - overall target reduction (5.75 Mt CO2 Eq) in agricultural emissions by 2030. Legally binding**
- Biogenic Methane: a reduction of at least 10% (on 2018 level)
- Nitrous Oxide: Emissions associated with chemical fertiliser use to reduce by more than 50%
- Water Quality: reduce nutrient losses from agriculture to water by 50%
- Biodiversity: 10% of farmed area will be prioritised for biodiversity
- Air Quality: Ammonia emissions to reduce to 5% below 2005 levels
- Forestry: Increase afforestation from existing levels to at least 8,000 ha per year & double sustainable biomass production
- Improve the Social Sustainability of Primary Producers

Climate Neutral by 2050

Ireland Deep Demonstration (DD)

Deep Demonstration
Sustainable food systems in Ireland

eit Climate-KIC
Co-funded by the European Union

Context

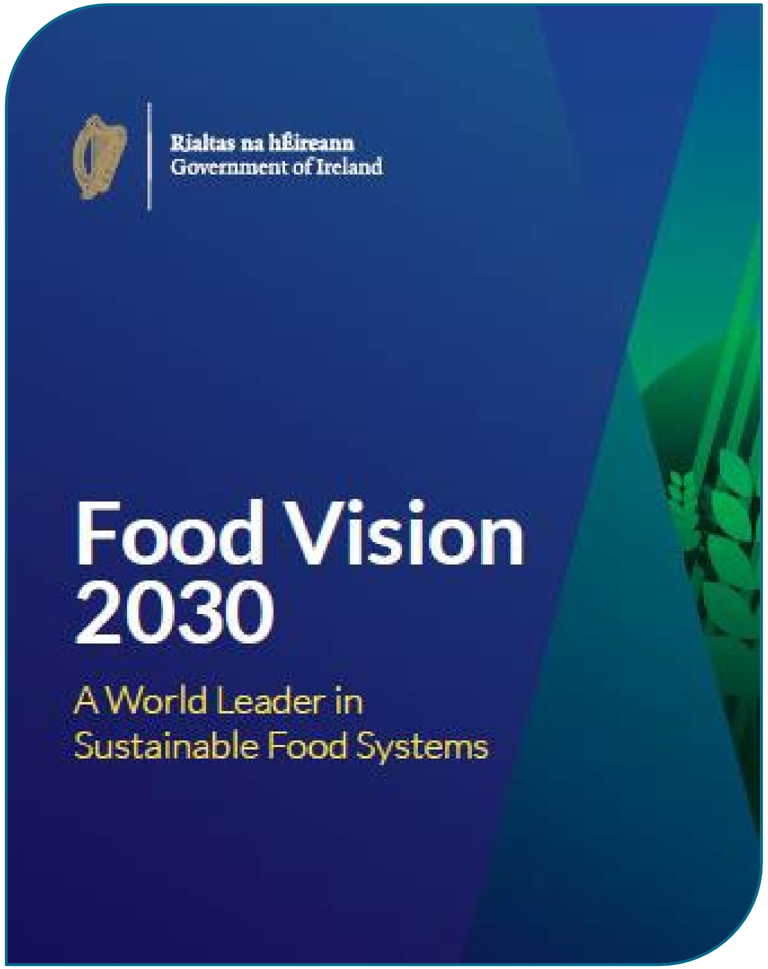
- Ireland's 2030 Food Vision; develop **a coordinated set of innovation actions** to support the transition to a climate-neutral agri-food sector
- DD partnership between EIT Climate-KIC and Ireland's DAFM

Ambition

- Contributes to **emission reduction targets**: 25% reduction by 2030
- Prepares for climate neutrality by 2050.

Methodology

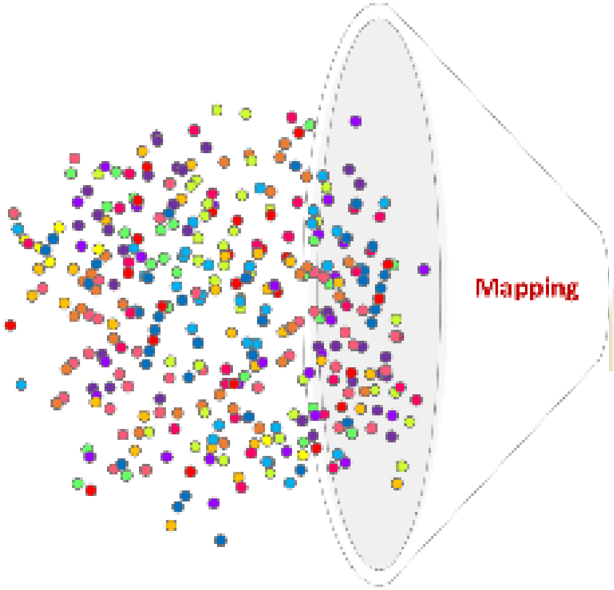
- '**Demand-led**': involves **co-designing interventions** with key stakeholders.
- Development and implementation of a **portfolio** of **large-scale connected interventions** in the land-agri-food system.
- It embeds rapid '**learning by doing**', to provide intelligence which will enable government and industry to make **informed decisions** about choices to meet climate goals.



More information: climate-kic.org/SustainableFoodIreland

Deep demonstration proces

275 project ideas



7 flagships

Flagship 1 Ireland Land-Agri-Food Sector Re-Imagined - Vision 2050

Flagship 2 Growing Irish Land, Agri-Food sector through Innovation and Investment in New Value Chains

Flagship 3 Implement Circular Bioeconomy Models at Regional or Multiple Value Chains level

Flagship 4 Valorise environmental services to diversify incomes through a comprehensive Carbon Farming/Nature Credit Framework

Flagship 5 Beef Value Chain Collaboration to produce and certify Climate Neutral Beef production.

Flagship 6 Dairy Value Chains Collaboration to Accelerate Emission Reductions and improve Sustainability on farms

Flagship 7 Grow and diversify the Tillage sector

Longer Term Focus
2040 – 2050
More Strategic
Regional & Sector Level

Shorter Term Focus
2030
More Practical
Value Chain Level

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WHY DOES IRELAND NEED A FRAMEWORK?

Conclusions from 1st workshop [~30 pp)

- To decarbonise Ireland's agriculture (improve and reduce GHG emissions) – Achieve Ireland's 2030 & 2050 Targets
- Protect the environment
- Financial diversification for farmers/Reward action/Incentivise change
- Food security
- Sustainable food system - ahead of the game
- Means for ensuring a new business model for more sustainable land use.
- Make environmental action economically viable

HIGH & BROAD EXPECTATIONS !!

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Flagship objective

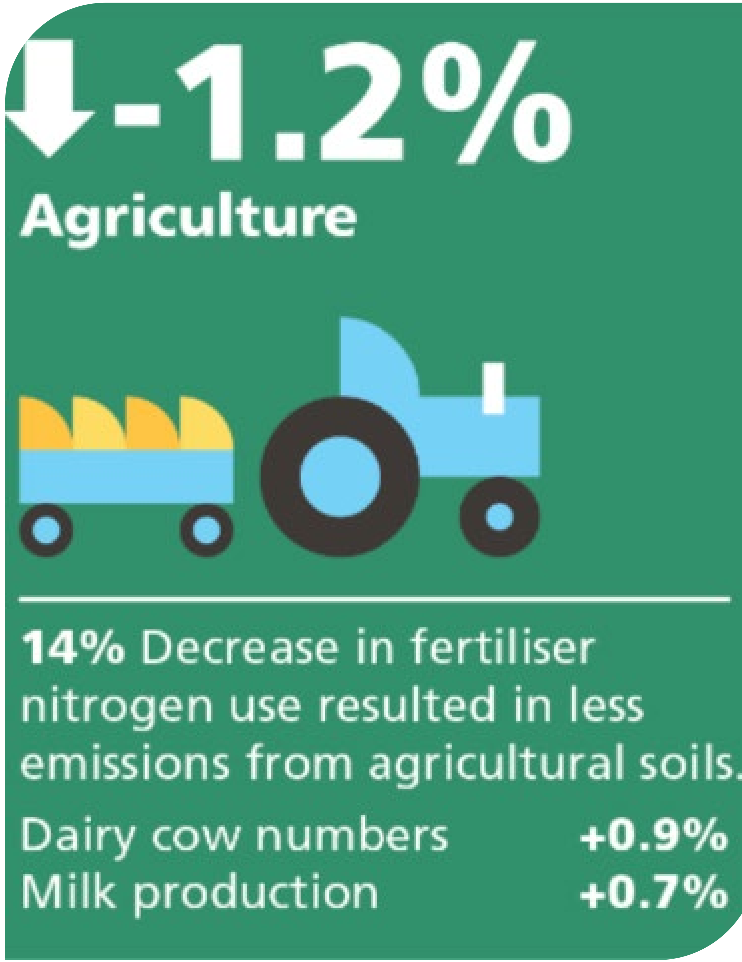
Overall Objective:

"To support and enable the adoption and scaling of management practices within primary production that will result in Ireland achieving its climate, biodiversity and water quality targets by the end of 2030."

Activation Phase Objective:

To develop by Q1 2024 a Framework that drives the adoption of climate and nature positive management practices at primary producer level.

1) Public consultation
2) Focussed engagement
3) Development of implementation plan



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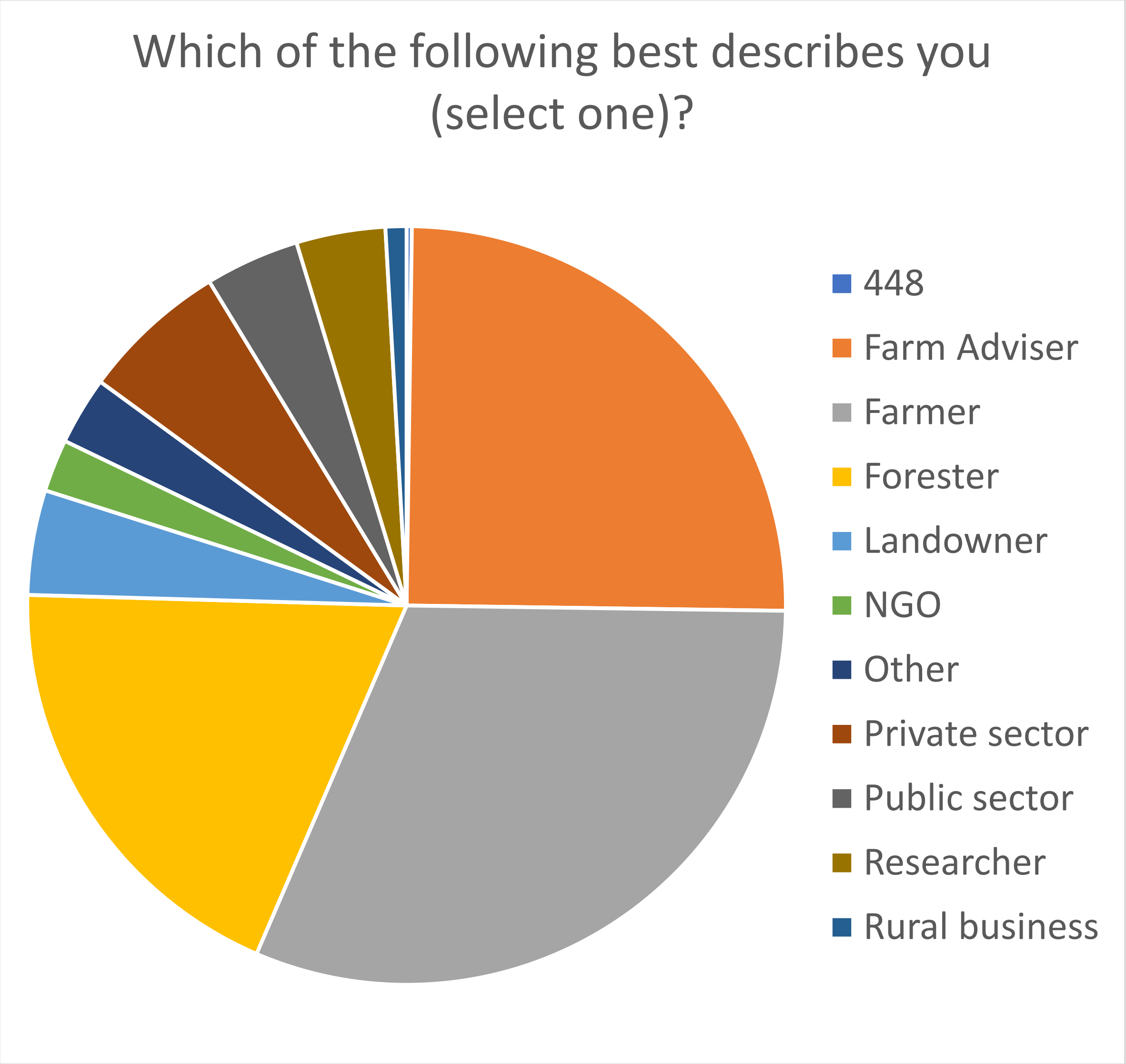
Public consultation: results

People want to be compensated for ecosystem services (n=436)

Lifetime of an initiative should be :

- 20 years (n= 223)
- Between 10 -20 years (n= 112)



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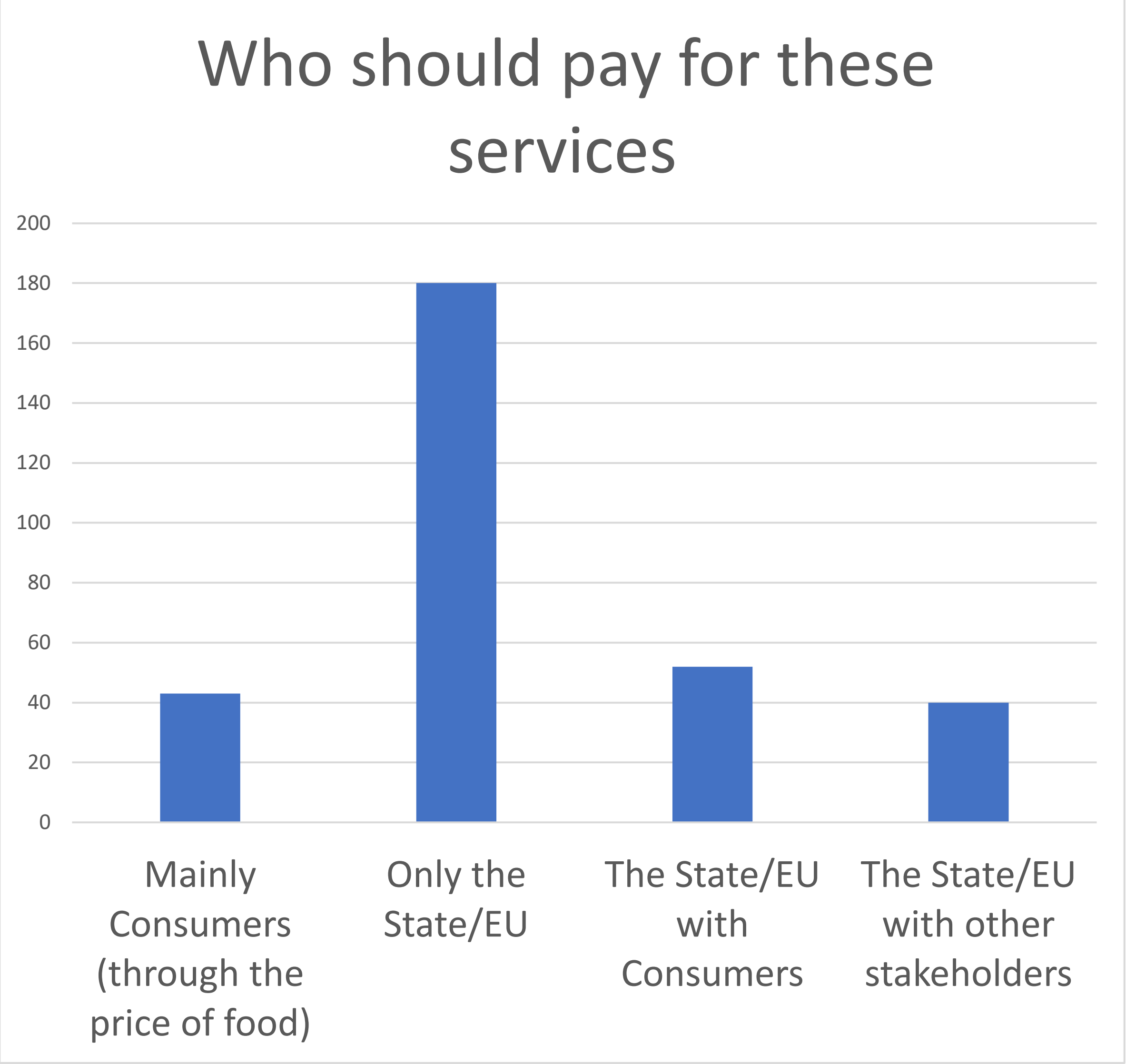
What should be included in a framework? (N=404)

1) emission reductions or avoidance,

2) carbon removals,

3) co-benefits of biodiversity and ecosystem restoration.

- 1, 2,3 => n=204
- 1+ 2=> n= 170
- 3 => 30



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Conclusions

- Interest in Carbon farming is high
- Willingness to participate high
- Expectations of CF are MASSIVE
- Integral approach is preferred by (Irish) stakeholders

=> **Panel**

- Steering on targets provides flexibility and space for location specific solutions [NL]
- Integral approach allows also realising other targets beyond carbon capture [NL]

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Moderator

Claire Chenu

Senior scientist and Coordinator of the EU co-funded programme EJP SOIL

INRAE (French National Research Institute for Agriculture, Food and Environment)

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Panel discussion

Tristano Bacchetti De Gregoris

Founder & Director of R&I

SAE Innova

Christian Holzleitner

Head of Unit – Land Economy & Carbon Removals

European Commission, DG Climate Action (CLIMA)

Cristiano Ballabio

Project Officer – Land Resources & Supply Chain Assessment

European Commission, Joint Research Centre (JRC)

Saskia Visser

Cluster Manager – Resilient and climate neutral regions

EIT Climate-KIC

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1st European Carbon Farming Summit
Save the date!
5-6-7
March
2024
Contribution submission will open soon
Place
Valencia

Which practices for European soils?

Regional agrosystems

Farmer acceptance

Co-benefits

Trade-offs

Value Chains

What standards and certification mechanisms?

Quality Criteria

Baselining

Overlapping schemes

Additionality

Offsetting and claims

How to monitor carbon fluxes?

Data harmonization

Model calibration

Emerging technologies

Remote Sensing

Monitoring initiatives

Website:
www.carbonfarmingsummit.eu

More information also at:
www.project-credible.eu

Any question please email to:
saskia.keesstra@climate-kic.org

Organised by:

CREDIBLE EU carbon farming

eit Climate-KIC

SAE INNOVA

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Programme Day 1 - Tuesday, 21 November

Time	Session Name	Building name
9:30 – 10:15	**Welcome and opening session**	*Main hall – Building A*
10:15 – 11:00	**Setting the scene for the Mission Soil**	
11:00 – 11:30	*Coffee Break*	
11:30 – 13:00	**The Mission Soil in a nutshell**	
13:00 – 14:00	*Lunch Break*	
14:00 – 16:00	**Breakout session 1 - Soil health for climate**	***ICA Institute - Building C***
	Breakout session 2 - Soil health for food	***Press Room - Building D***
	Breakout session 3 - Farming practices for soil health	***Blas Cabrera Institute - Building B***
16:00 – 16:30	*Coffee break*	*Main hall - Building A*
16:30 – 16:45	**Reporting from breakout sessions**	
16:45 – 17:45	**Launch of the international research consortium on soil carbon**	
17:45 – 18:15	**Mission Soil photo competition award ceremony**	
18:15 – 19:00	*Cocktail & Networking*	

Organised by

European Commission

Hosted by

GOBIERNO DE ESPAÑA MINISTERIO DE CIENCIA E INNOVACIÓN

CSIC

INIA Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria

UE 23

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Coffee Break (Main Hall – Building A)

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