

ANNUAL SCIENCE DAYS & 5TH GENERAL MEETING



10 – 14
JUNE
VILNIUS
LITHUANIA

An introduction

Claire Chenu (INRAE)
Anna Besse (Wageningen UR)

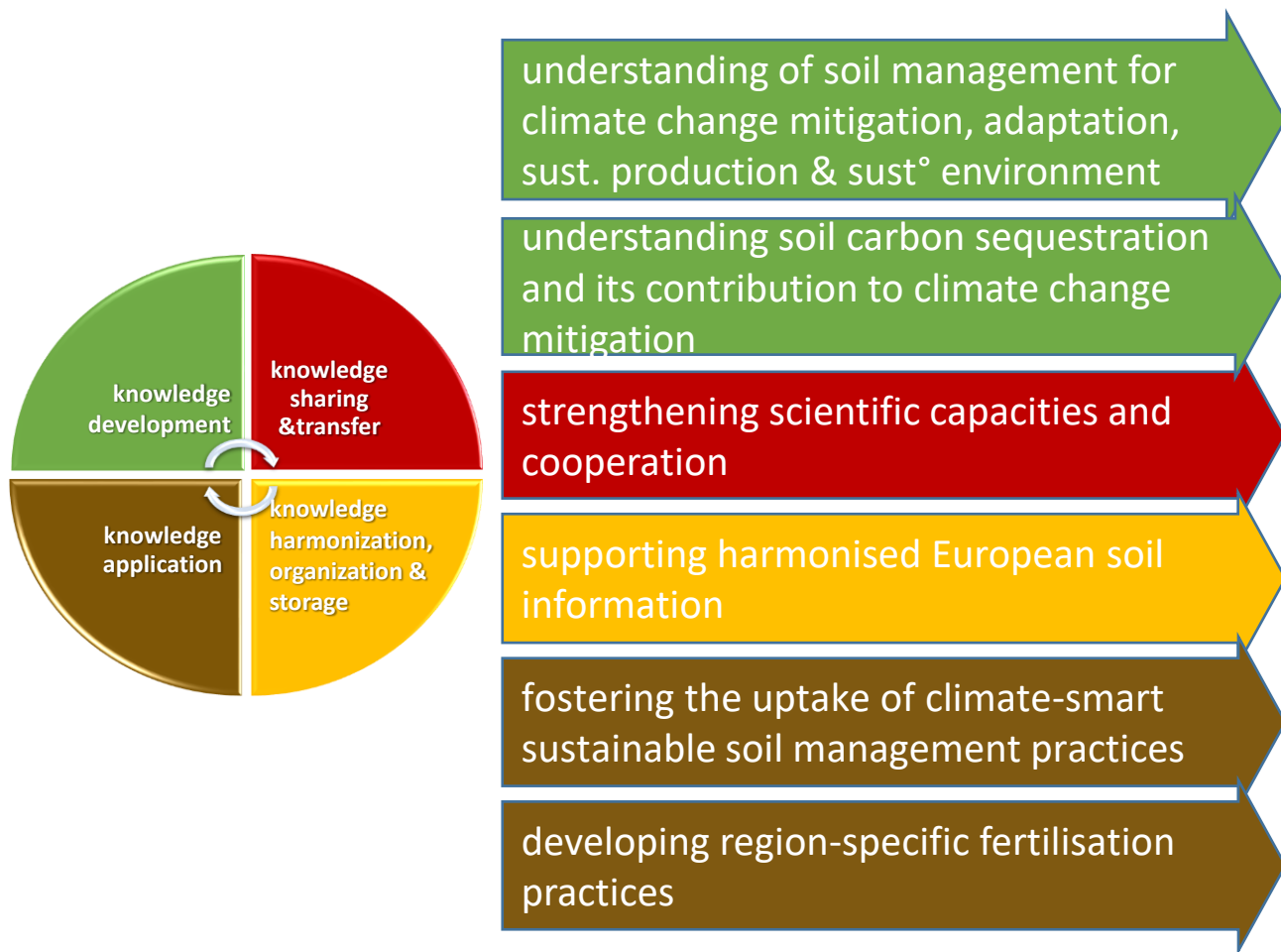


EJP SOIL
European Joint Programme

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



EJP SOIL: knowledge framework & expected impacts

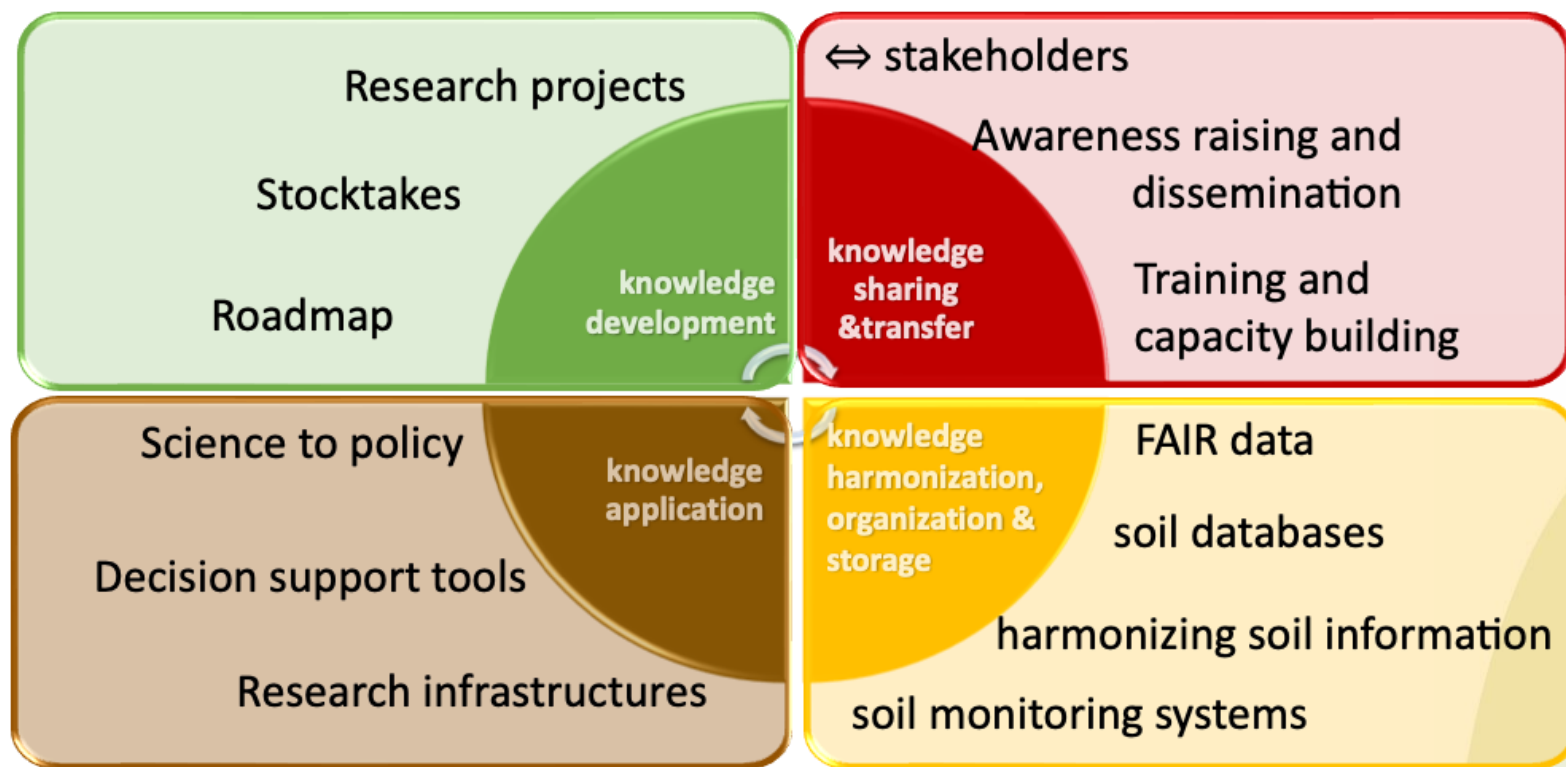


farming sector:

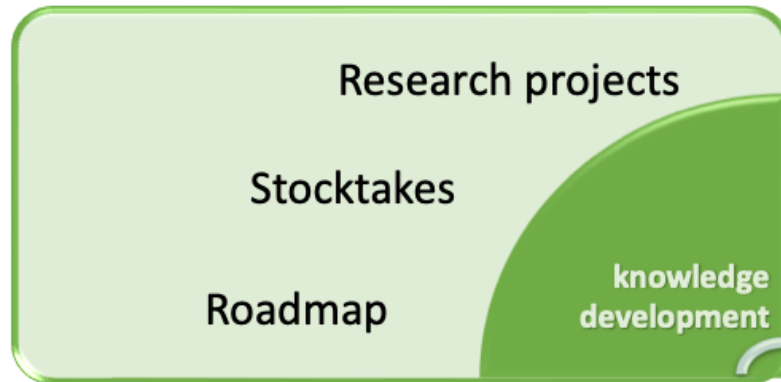
- its role as a steward of land and soil resources.
- its capacity to adapt to climate change and contribute to mitigation and carbon sequestration

research sector: long-term alignment and implementation of soil-related research strategies and activities at national and EU level

EJP SOIL: knowledge framework activities



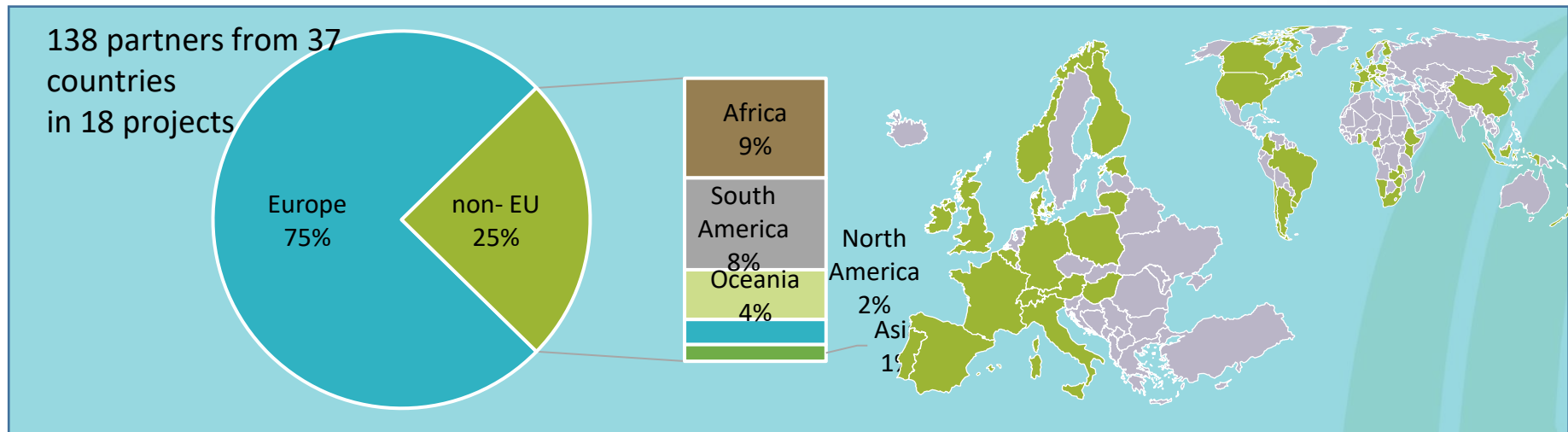
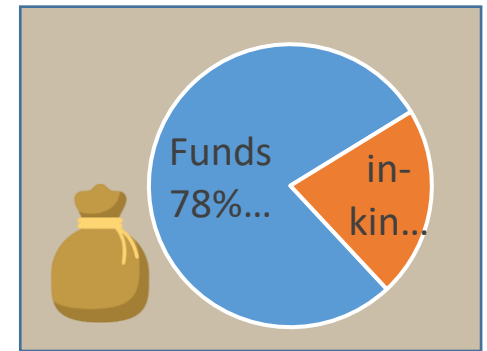
EJP SOIL: Year 4 activities and achievements



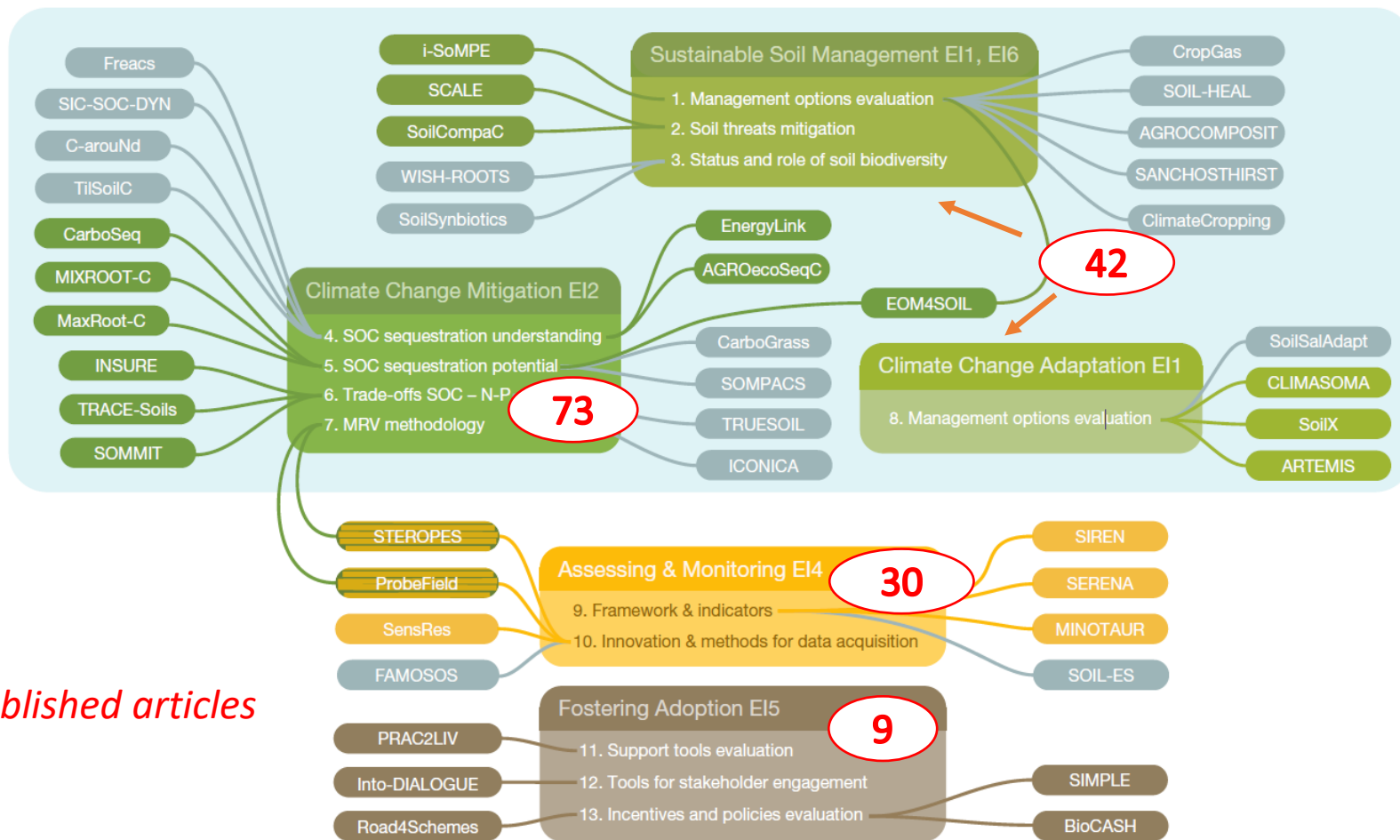
Expanding knowledge development beyond EJP SOIL consortium

Topics in line with EJP SOIL roadmap

Towards an international research consortium on soil C



Landscape of EJP SOIL projects

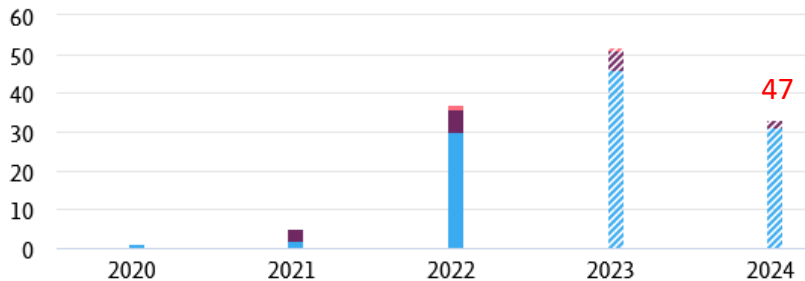


Number of published articles

Publications in high-impact journals (Scopus)

Publications by Journal quartile

Share of publications per Journal quartile by [CiteScore Percentile](#)



☒ Incomplete year [?](#)

EJP SOIL special issues in EJSS:

- Vol.1: 17 articles published
- Vol.2: 3 manuscripts in review
(submit before June 30)

Quartiles

- ☒ Q1 (top 25%)
- ☒ Q2 (26% - 50%)
- ☒ Q3 (51% - 75%)
- ☒ Q4 (76% - 100%)

Publications [?](#)

Publication share (%)

☐ Scopus Source

Scholarly Output [↓](#)

<input type="checkbox"/>	European Journal of Soil Science	17
<input type="checkbox"/>	Geoderma Regional	9
<input type="checkbox"/>	Global Change Biology	7
<input type="checkbox"/>	Agronomy	6
<input type="checkbox"/>	Remote Sensing	5

WUR Library, april 2024

Informing the impact pathways

understanding of soil management for climate change mitigation, adaptation, sust^o production & sustainable environment

understanding soil carbon sequestration and its contribution to climate change mitigation

strengthening scientific capacities and cooperation

supporting harmonised European soil information

fostering the uptake of climate-smart sustainable soil management practices

developping region-specific fertilisation practices

Project	EI	General theme	Topic	Outputs (extracted/ understood from the proposal)	Products (that materialize the outputs and will contribute to the outcomes)	Outcomes 1 (extracted / understood from the proposal)	Outcomes 2 (more general) (lines do not necessarily match between outcomes 1&2)	Stakeholders
SoilX	E1	Climate change adaptation	Management options evaluation	Identifying adaptation options, related to agricultural soil management, to respond to water-related impacts of extreme weather and climate change	Manuscript draft on long-term impacts of soil/crop management on soil structure across selected pedo-climatic regions of Europe 10.1111/ejss.13455 Development of a soil crop model that could be used to predict consequences of sustainable mgt options when extreme events occur (Claire)	Improved understanding of spatial and temporal variability in soil-management-related adaptation benefits and potential mitigation/sustainability co-benefits	Improved basis of knowledge and evidence to provide better soil management advice for both farmers and policy makers in Europe in relation to climate adaptation	regional farming communities
				Identify context-dependent inhibiting/enabling factors for the uptake of beneficial soil management practices	Manuscript draft on Q. methodological study, including comparisons across countries and stages of adoption	Improved understanding of factors inhibiting and facilitating farmers' use of sustainable soil management practices and their regional variation across Europe	Knowledge is used to select or co-design sustainable management options	policy makers
				Improve the evidence base on management impacts on water regulation functions of the soil and crop response	This manuscript will present outputs from measurement-informed simulation experiments conducted in T3.5 ???	Improved data basis contributing to understanding of mechanisms driving soil and crop management impacts on soil structure, soil physical conditions and related abilities of the soil to buffer impacts of precipitation extremes		scientific community
					Policy brief based on stakeholder/farmers interviews and validation processes (M57)			general public
ARTEMIS	E1	Climate change adaptation	Management options evaluation	Analysis of long-term field experiments in different regions, allowing identification of specific AE systems with the highest resilience against climatic extreme events		Improved knowledge on the resilience of specific agroecological (AE) systems to withstand climate extremes in comparison with commonly practices control	Ability of European soils to sustain more frequent extreme events to guarantee a more sustainable and climate responsive agricultural production is better understood	scientists, farmers, advisors, policy makers
				On a regional level, identification of best AE management practices by numerical modeling and evaluation of the effect of different climatic developments on crop production and soil indicators		Improved knowledge on how different management options for AE systems affect soil services		
				Meta analysis on the European scale allowing a quantitative summary of the current knowledge on the contribution of soils to ecosystem services related to climate mitigation and sustainable agricultural production in AEs	Meta-analysis of management effects on crop yield, SOC and N2O.	Improved knowledge on trade-offs and synergies between crop yield, SOC and N2O emission across agroecosystems.		
				Specific soil related ecosystem services indicators determined together with practitioners, aiming to improve the efforts to monitor soil indicators that potentially contribute to climate change mitigation and adaptation as well as soil health at farm level		Delivered science-based practical knowledge on sustainability of AE systems to practitioners		

An open-source metadataset of running European mid- and long-term agricultural field experiments

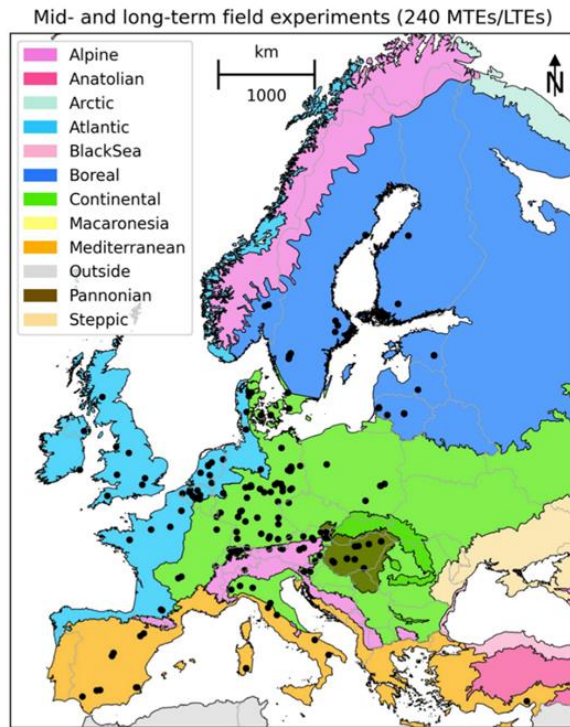


FIGURE 3 Distribution of the collected mid- and long-term field experiments across Europe with European biogeographical regions.

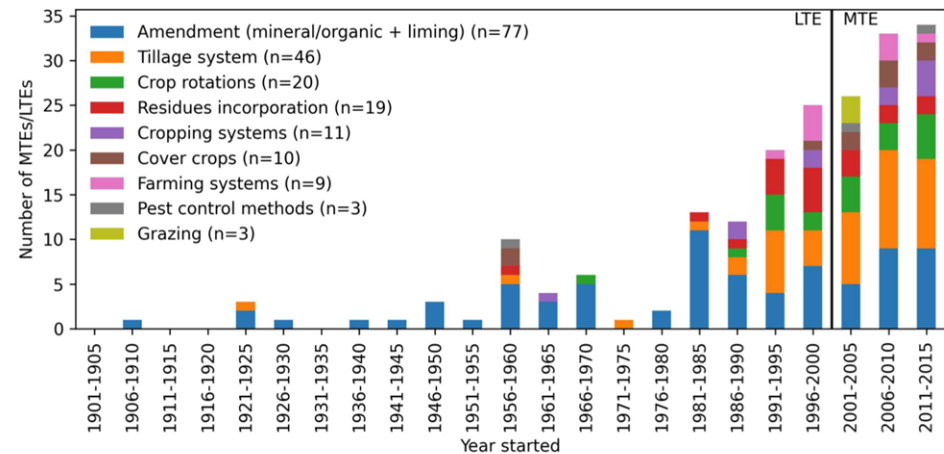


FIGURE 6 Evolution of newly started MTEs/LTEs with respect to their research themes. Note that one MTE/LTE can have several research themes (e.g. it can investigate both tillage and cover crops) and hence can be counted multiple times. The research theme about 'amendments' includes experiments that investigate mineral/organic or no fertilizer (67 MTEs/LTEs) and 10 MTEs/LTEs investigating liming.

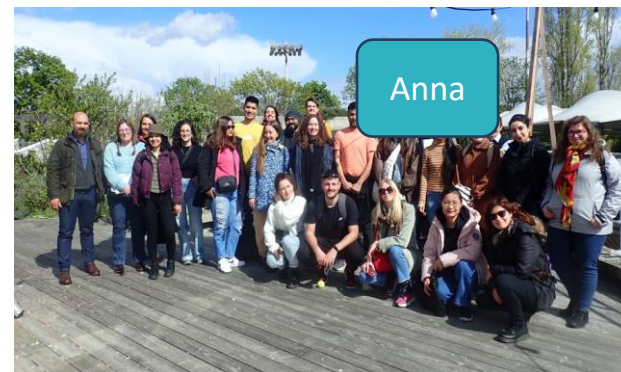
Dommez et al. 2023, *Soil Use and Management*
DOI: 10.1111/sum.12978
<https://lte-eu.bonares.de/experiments>

EJP SOIL: Year 4 activities and achievements



EJP SOIL PhD schools

- 140 participants in 7 courses, +1 course yet to take place
- Materials on [EJP SOIL Knowledge Platform](#)
- *Some PhDs follow several courses!*



EJP SOIL partner institution		Course title
Swedish University of Agricultural Sciences, Sweden	2021	Soil Systems: Analytical methods for integrating the chemical and biophysical interface in soils
University of Palermo, Italy	2022	Soil management for sustainable agriculture
University of Latvia, Latvia	2022	From field to model: peat soil study, mapping, statistical analysis and modelling
AgroParisTech, France	2023	Ecosystem services assessment in agricultural and peri-urban areas
Aarhus University, Denmark	2023	Merging measurements and modelling in soil physics
Swedish University of Agricultural Sciences, Sweden	2023	Soil Systems: Analytical methods for integrating the chemical and biophysical interface in soils
Swedish University of Agricultural Sciences, Sweden	2024	Data management and modelling:
Thünen campus in Braunschweig, Germany	2024	Soil organic matter management

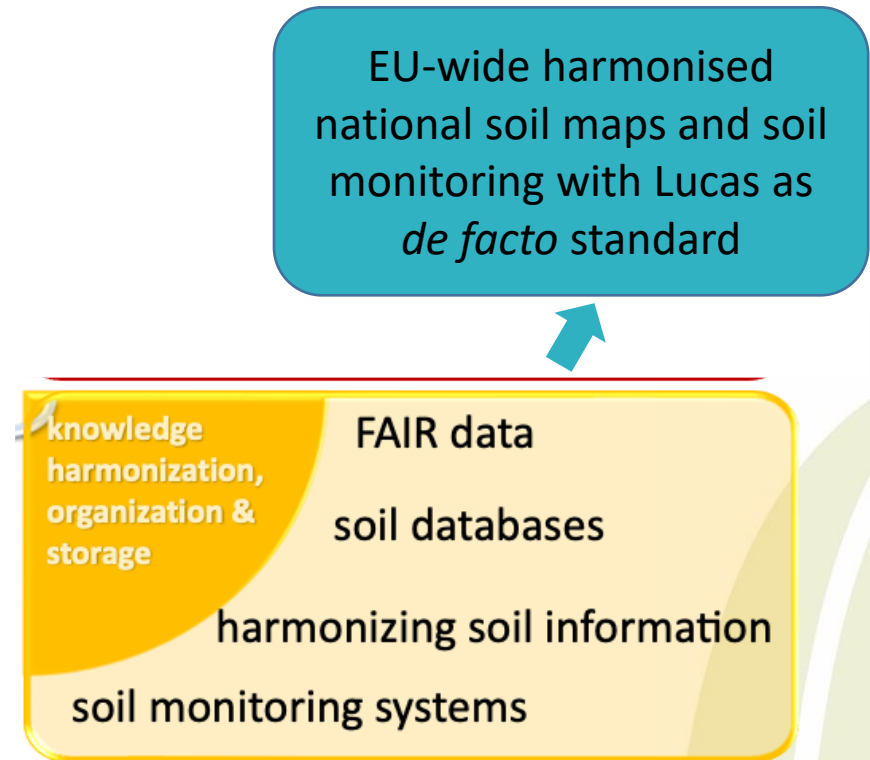
EJP SOL visiting scientist & infrastructures scheme

1-4 weeks study visit to an EJP SOIL affiliated or non-affiliated research partner, to develop joint research

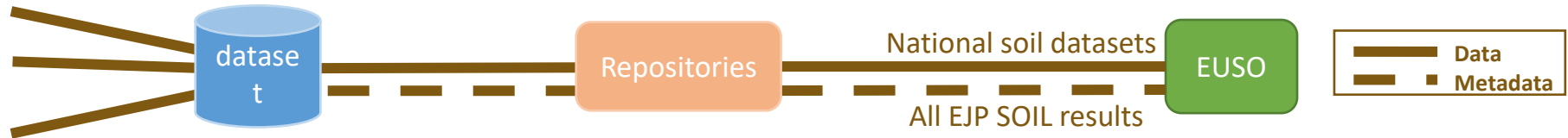
- 72 participants in 7 calls
2021-2024
- >50% - *early career (PhDs, Postdocs)*

Visiting scientist	Women /men (%/%)	PhD and postdocs of total	Number of successful applications
Call 1,2 2021	50/50	80%	12
Call 3,4 2022	34/66	50%	18
Call 5, 6 2023	56/44	42%	34
Call 7 2024		38%	8

EJP SOIL: Year 4 activities and achievements



A metadata catalogue: make data findable



- Contains:
- Data produced in the EJP SOIL
 - National datasets
 - Total: 555 datasets

<https://catalogue.ejpsoil.eu/>

Cookbook for guidance:

<https://ejpsoil.github.io/soildata-assimilation-guidance>

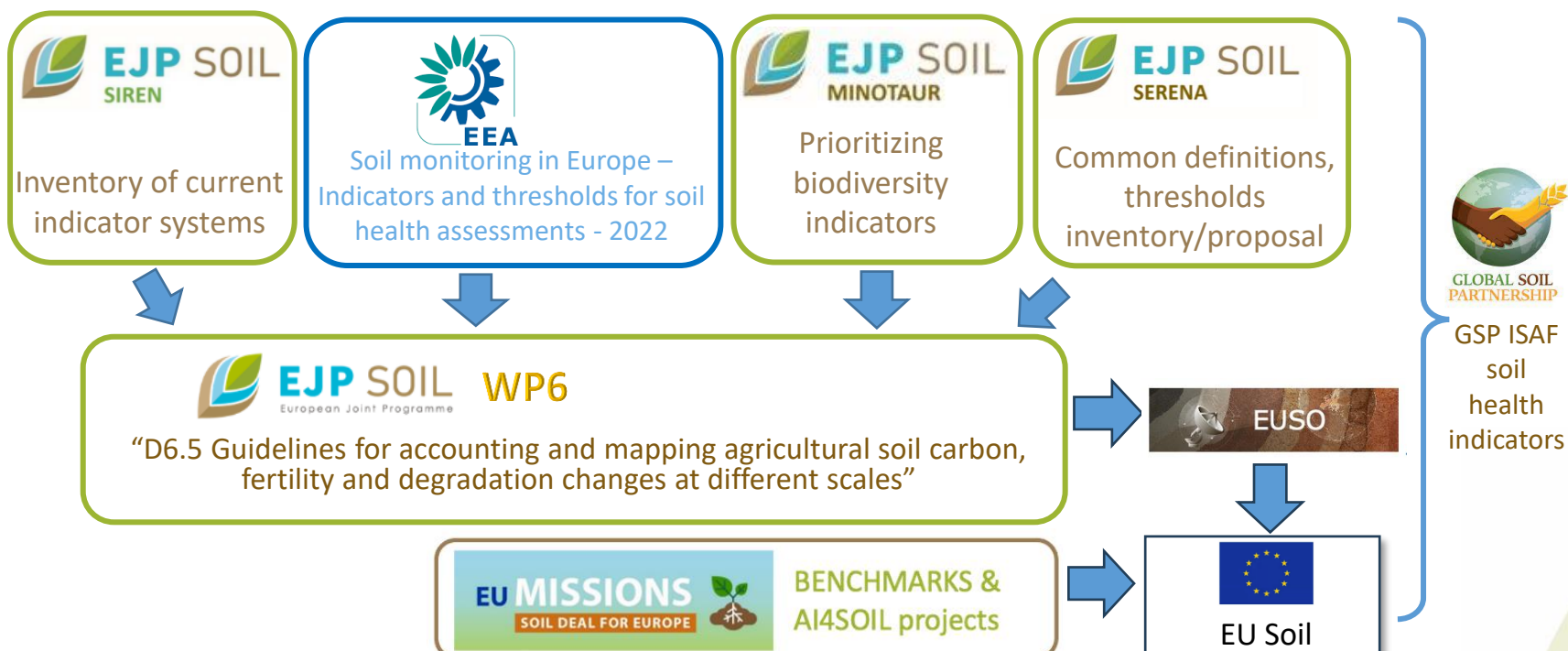
Search in the catalogue

Search

Records recently modified

Erste Bodenzustandserhebung Landwirtschaft – Kerndatensatz	Supplementary material to, Quality Assessment of Meta-Analys...	Etude 4pour1000, BANCO simulation data for publication of th...	EJP SOIL CarboSeq agrometeorological datasets	Mathematical techniques to remove moisture effects from visi...	Software EX-TRACT
------------------------------------------------------------	-----------------------------------------------------------------	-----------------------------------------------------------------	-----------------------------------------------	-----------------------------------------------------------------	-------------------

Developing soil health indicators

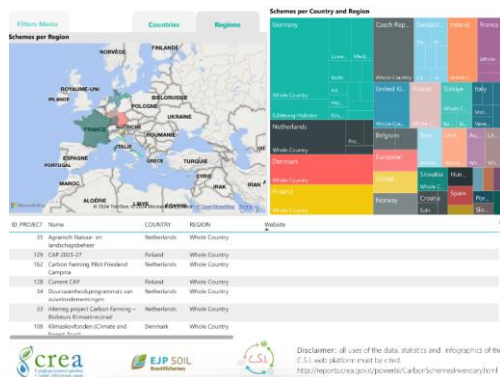


Soil parameters	Soil Quality Indicator	Frequency	Depth and scale	Costs
SOC	SOC/SOCexp (ØSML).	Can be measured every 5 y since not that expensive but changes will only be detected after 10 y or more	Topsoil and subsoil /Field	10 to 30 € for measuring SOC
	SOC/SOCmax (ØSML).	10 y	Topsoil and subsoil /Field	50 to 80 € for measuring SOC stocks (bulk density)
	Delta SOC content (ØSML).	10 y	Topsoil and subsoil /Field	
	Delta SOC Stock (ØSML).	10 y	Topsoil and subsoil /Field	
Nutrients	total N (⊕SML)	10 y	Topsoil/Field	10 to 25 €
	available P (⊕SML)	5-10 y	Topsoil/Field	10 to 40 € (usually done with other nutrients)
	P stocks (Ø SML)	10 y	Topsoil and subsoil /Field	10 to 80 € (usually done with other macro-nutrients)

EJP SOIL: Year 4 activities and achievements



EU Carbon removals certification framework



162
SCHEMES



EIPSOIL Comments on the 'proposal for a regulation of the European Parliament and of the Council establishing a Union certification framework for carbon removals' COM(2022) 672 final
Irene Criscuolo, Francesco Gaiotto, Francesca Varrà, Giovanni Dara Guccione on behalf of CREA-PB Team

In principle, the EIPSOIL consortium welcomes the proposal for a European regulation to promote carbon removals to counterbalance hard-to-abate residual emissions by creating a unique certification framework guaranteeing comparability and trust across European countries.
Please note that the following comments are 'informed' opinions based on information from existing public and private initiatives in and out of Europe. Any proposal for change is aimed at reducing the risk that financial support goes to carbon removal activities that cannot be relied upon as effective mitigation actions and that carbon removal activities will not be largely applied because of complexity of application and high costs of the monitoring, reporting and verification system described in the regulation.

CHAPTER 1 – CHAPTER 1 GENERAL PROVISION

Article 1 – Subject matter and scope

Article 1 (2) – “This voluntary Union framework for the certification of carbon removals does not apply to emissions falling within the scope of Directive 2003/87/EC, with the exception of the storage of carbon dioxide emissions from sustainable biomass that are zero-rated in accordance with Annex IV thereto”.
First of all, we find this clarification to be very positive and beneficial to the European climate policy.

CHAPTER 2 – QUALITY CRITERIA

The European Commission is kindly requested to reconsider content of this chapter, due to the fact that the current vagueness of articles would never allow for a proper implementation of the certification system, even with subsequent delegated acts. Below we provide additional explanations.

Article 4 – Quantification

Article 4 (1) – “A carbon removal activity shall provide a net carbon removal benefit, which shall be quantified using the following formula:
$$\text{Net carbon removal benefit} = \text{GCR}_{\text{baseline}} - \text{GCR}_{\text{total}} - \text{GCR}_{\text{increase}} > 0$$

In light of this formula, and without further explanation in the Impact Assessment Report accompanying the document, the carbon removal methodology appears inconsistent and enigmatic. Moreover, the most controversial point concerns the exclusion of reduction of greenhouse gas emissions from the count as stated in the concluding part of the recital 8 which reads as follows: “A reduction in greenhouse gas emissions resulting from the implementation of the carbon removal activity should not be taken into account to quantify the net carbon removal benefit, but should be considered as a co-benefit towards the sustainability objective of climate change mitigation; by being reported on the certificates, decreases in greenhouse gas emissions (like the other sustainability co-benefits) can increase the value of the certified carbon removals.”

DG CLIMA
CRCF Experts
group

2nd meeting of the Carbon Removals Expert Group 21-22 June 2023 Brussels
Carbon Farming: mapping of certification methodologies

EJP SOIL
EUROPEAN JOINT PROGRAMME

WORK PACKAGE 8
SCIENCE TO POLICY

Save the Date
3RD POLICY FORUM

SEQUESTERING CARBON IN
SOILS AND THE ASSOCIATED
TRADE-OFFS

Wednesday 11th October 2023
09:30 - 11:30 CEST
Online Event

Focus: To present scientific information in support of the policy needs related to the new regulation on carbon removals based on the research findings of the EJP SOIL. This forum will develop discussion on relevant management options to sequester carbon in agricultural soils and the potential trade-offs associated with them in an effort to support policy makers' understanding of these findings to better inform future decision making.

EJP SOIL
RoadSchemes

Policy Brief
MAY 2024

Towards a regulation on carbon removals in the EU: lessons learned from existing experiences
Criscuolo I., Gaiotto F., Martelli A., Falconi L., Dara Guccione G., CREA, Normington Thomas M., Ali

- A common Monitoring Reporting and Verification (MRV) methodology is needed in Europe to guarantee comparability of carbon farming (CF) removals.
- Market mechanisms can potentially incentivise CF more effectively than existing CAP payment schemes.
- Make use of the existing information Administrative and Control Systems (ACS) of the CAP to minimise MRV costs.

<https://eipsoil.eu/science-to-policy>
<http://reports.crea.gov.it/powerbi/CarbonSchemesInventory.htm>

EU Soil Monitoring Directive proposal

EJP SOIL
European Joint Programme
WORK PACKAGE 8
SCIENCE TO POLICY

Save the Date
AN OPEN WEBINAR ON
THE EU PROPOSAL FOR A LAW ON SOIL
Tuesday 11th July 2023
10:00 - 11:00 CEST
Online Event

With key note speaker:
Mirco Barbero
Team Leader
Soil protection and Sustainable Land Use
ENV D1 Land Use & Management
DG Environment

Followed by a Q & A Session

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 862095

EJP SOIL
European Joint Programme
WORK PACKAGE 8
SCIENCE TO POLICY

THE EU PROPOSAL FOR A LAW ON SOIL
WEBINAR AUDIENCE COMPOSITION

511 ATTENDEES

Other 20.9%
Policy 19.8%
Research 59.3%

EJP SOIL
European Joint Programme
WORK PACKAGE 8
SCIENCE TO POLICY

Save the Date
4TH POLICY FORUM SUSTAINABLE SOIL MANAGEMENT OPTIONS
Thursday 11th April 2024
09:30 - 11:30 CEST
Online Event

Focus:

- Presenting scientific information on sustainable soil management options based on research findings of the EJP SOIL
- Developing discussion on the process of selecting relevant management options to meet EU policy objectives under the EU Soil Strategy, Soil Monitoring and Resilience Law and Carbon Soil Strategy, Soil Monitoring and Resilience Law and Carbon certification removals framework
- Providing information on links between various soil management options and the ecosystem services delivered by agricultural soils
- Supporting policymakers' understanding of these findings to enhance future decision making

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 862095

EJP SOIL
European Joint Programme
Policy Brief
October 2023

SOIL MONITORING SYSTEMS
Challenges / recommendations towards harmonization

Mason E., Fréger C., Biggio A., Fantaghi M., Hassel R., van Emond F., Witterling J., Bozina S., Bakacsi Z., & Chenu C.

- Differences in sampling strategies, designs and protocols make soil data difficult to compare across countries and with LUCAS Soil
- Countries do not want to change their protocols but could add new monitoring sites
- Harmonization options of soil monitoring systems and LUCAS Soil exist, such as developing transfer functions
- Major differences between a national soil monitoring system and LUCAS both on sampling strategy and measured soil properties can impact soil quality and soil health assessment

INTRODUCTION
Soils are constantly evolving due to natural processes driven by factors such as climate and soil organisms, but also due to external pressures linked mainly to human activities. The evolution of soils makes it necessary to set up monitoring programs.

Since 30 years, several projects and initiatives (e.g. ENVASSO, Landmark, SOIL4EU) underlined the existing difficulties to compare and share data between national Soil Monitoring Systems (SMS), either due to technical issues (e.g. different sampling designs and protocols, analytical methods, data format, standards) but also due to lack of motivation (e.g. why share the data?, costs) and legal requirements. These difficulties pushed EJP SOIL to develop its own monitoring system (LUCAS Soil) to report on the status of soils in Europe.

How to combine the efforts of Member States in monitoring soils with the one developed by EJP SOIL within the LUCAS Soil program?

A questionnaire was designed and circulated to EJP SOIL partners to identify main differences between SMS and possible ways of harmonization.

DIFFERENT SAMPLING STRATEGIES, DESIGNS AND PROTOCOLS BETWEEN SMS
A transversal analysis was made to identify similarities and differences between the 27 reported SMS (collected from 38 countries). Most SMS were developed and started in the nineties to monitor soil quality. Agriculture is the main land use investigated in our survey; forestry regularly has its own national SMS. The majority of SMS have at least 2 sampling campaigns (done or currently running) or more. The number of sites per country is highly variable but most have at least 1 site representing 300 km². In the majority of SMS, the monitoring sites were selected according to several criteria such as land use, soil type, main crop, climatic zone, but regular grids are also used. On monitored sites, 50 to 60% of the countries also collect information on soil management and on the surroundings. The sampling protocol is quite variable as the sampling area ranges from less than 1 m² to 1 ha. The depths of sampling are also quite different as samples are taken according to soil horizons or just at one depth (0-20 or 0-30 cm) or at multiple depths (2 to 5).

EJP SOIL
European Joint Programme
Policy Brief
MAY 2024

A framework for setting soil health targets and thresholds in agricultural soils

Amanda Matson, Maria Fantaghi, Grant A. Campbell, Jorge F. Miranda-Velaz, Jack H. Faber, Lucas Carvalho Gomes, Rudi Hessel, Marcos Lana, Stefano Miccoli, Peter Smith, David Robinson, Antonio Bispo, Fenny van Emond, Selma Keesstra, Nicolas P.A. Saby, Bozena Smreczak, Claire Fréger, Adam Sutrymanov, and Claire Chenu

- Four approaches to setting soil health targets/thresholds identified and compared
- Case studies highlight the need for flexible, context-specific and data-driven approach
- Framework proposed for use in monitoring programs to support soil health

INTRODUCTION
Soil health, the current capacity of soils to provide ecosystem services (Faber et al., 2022), is at the centre of the European effort to reverse soil degradation (Panagos et al., 2022). Soil health is defined through soil indicators, which are assessed using thresholds (critical values not to surpass) thresholds are highly site-, management- and climate-specific, and there is not yet a level of detail (EPA 2023). With policies worldwide being established to promote soil health, there is an urgent need for the development of a system to assess soils.

Including relative change (Fig. 3), we developed a framework (Fig. 4) that facilitates both choosing the most appropriate target/threshold method for a given context, and using targets and thresholds to promote soil health.

COMPARISON OF APPROACHES
The four approaches were presented during two EJP SOIL Policy Forums (EJP SOIL 2023). In participant polls, the reference approach was identified as desirable, but relative change, was considered the most feasible approach.

Using a fixed value would be the simplest approach, but these values are simply not available for many cases. The most significant drawback to the reference and distribution approaches is that assigning percentages or percentiles is arbitrary.

Figure 1. The difference between thresholds and targets for assessing soil health indicators.

Figure 2. Descriptions of four different approaches to setting targets and thresholds for soil health indicators.

EJP SOIL
European Joint Programme

European Joint Programme SOIL. Feedback and survey of information supporting/ enabling discussion on the Soil Monitoring Law proposal

EJP SOIL coordination: Claire Chenu, coordinator, Anna Besse, co-coordinator,
Work Package 6 team on Soil data and information
and contributors to the deliverables referred to in this document
2023-11-10

EJP SOIL is a European research programme, co-funded between the EU commission and 24 European countries, that aims to develop knowledge, share it and harmonize it towards climate-smart and sustainable management of agricultural soils. Work performed by the EJP SOIL is highly relevant for several of the chapters of the proposed Directive on Soil Monitoring and Resilience. EJP SOIL welcomes progress towards a better soil monitoring and thereby towards a better protection and sustainable management of soils. We develop here a series of points, not commenting in a comprehensive way the different chapters of the Directive proposal, but identifying the supporting information from the EJP SOIL that is publicly available as Deliverables, policy briefs, webinars or scientific publications.

Chapter 1- General provisions.

Definitions. Soil health: the EJP SOIL endorsed the definition proposed by the Soil Mission board, that soil health is the actual capacity of soils to provide ecosystem services. This definition is more precise than that in the current law proposal as it differentiates it from soil quality, which is the potential to provide ecosystem services. This has the merit to support a context-dependent evaluation of soil health as, intrinsically, different soils do not have the same ability to provide ecosystem services. Definitions can be found in: [EJP SOIL policy brief](#).

Competent authorities. EJP SOIL inventoried whether competent authorities have been appointed at the national or regional scale for soil data, in 24 European countries. Mobilizing the existing competent authorities whenever possible should foster implementation of the directive ([EJP SOIL deliverable 6.2](#)).

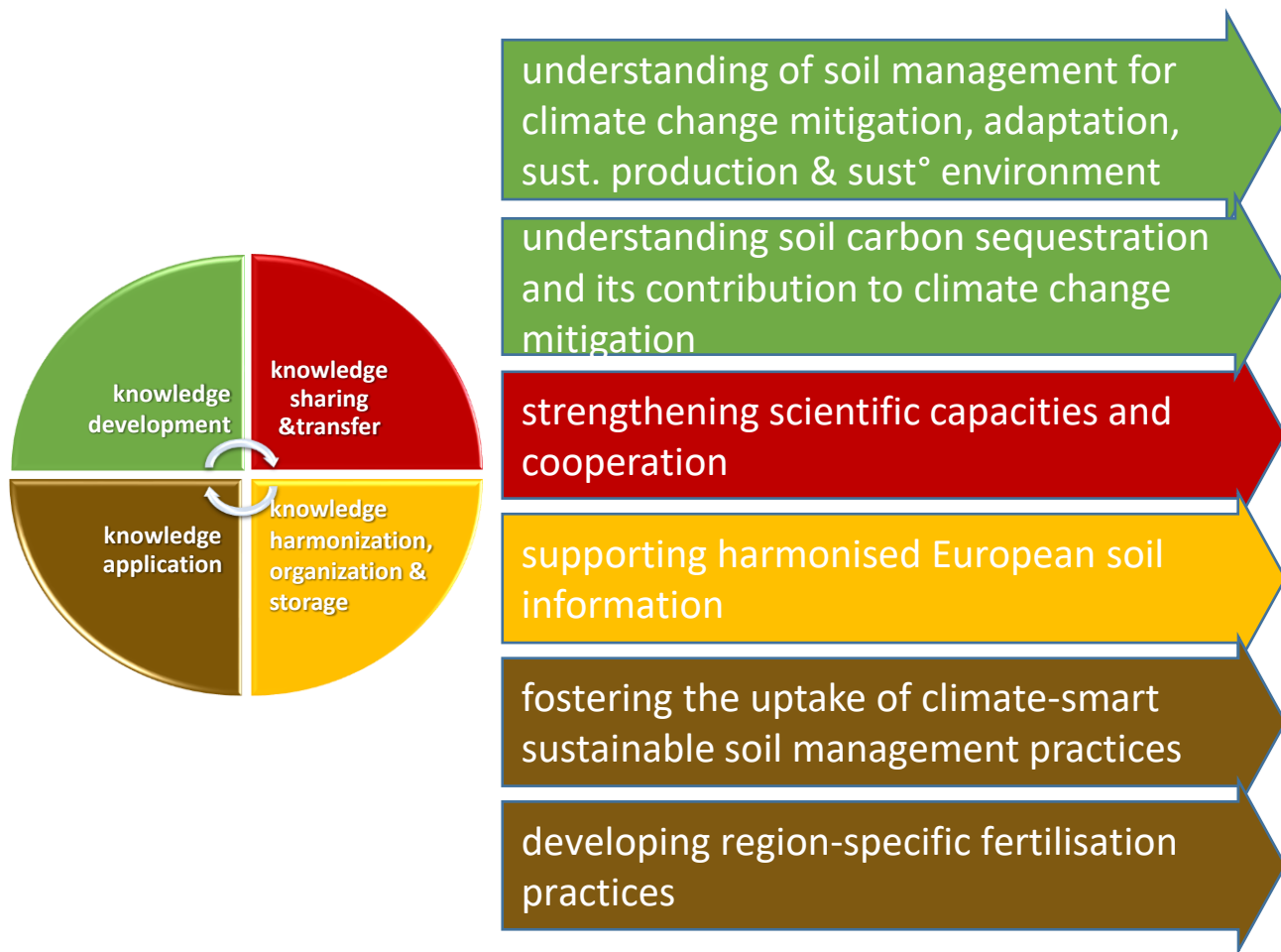
Chapter 2. Monitoring and assessment of soil health

Article 6- Soil health and land take monitoring framework. The comma 6 of the article states the establishment by the Commission and the EEA of a digital soil health data portal that shall provide access in georeferenced spatial format to at least the available soil health data resulting from measurement carried out by the Commission itself and by Member States as foreseen in article 8(2). The EJP SOIL inventoried national regulations relative to soil data

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 862015.

- Citations of EJP SOIL in policy documents
- EJP SOIL experts involved at national scale
- Collaboration DG-ENV WP6

EJP SOIL: knowledge framework & expected impacts



farming sector:

- its role as a steward of land and soil resources.
- its capacity to adapt to climate change and contribute to mitigation and carbon sequestration

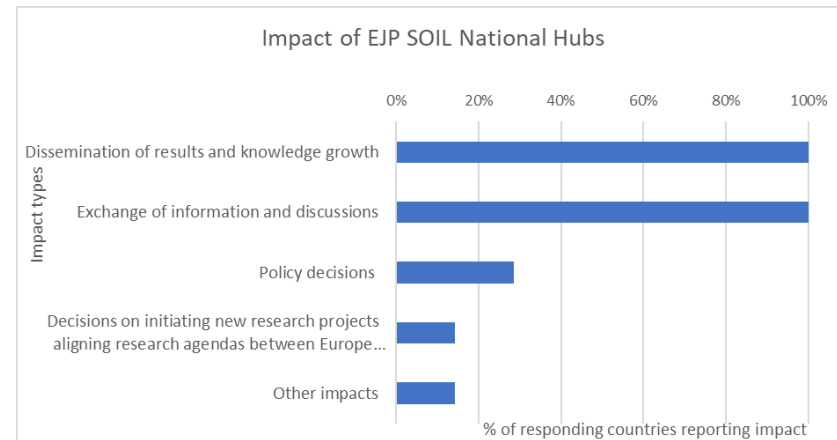
research sector: long-term alignment and implementation of soil-related research strategies and activities at national and EU level

EJP SOIL National Hubs: a new instrument for national stakeholders' consultation & science - policy interface



- Soil needs are stakeholder and region specific: no one size fits all
- EJP SOIL NHs are a good foundation for Soil Mission mirror groups

NHs are established in all 24 EJP SOIL countries



Successful stakeholder participation to address soil needs.

Saskia Visser, Claire Chenu, Anna Besse, Niels Halberg and Teresa Pinto Correia

- Soil needs are stakeholder and region specific.
- The implementation of the EU's Mission Soil, the EU Soil Strategy for 2030 and the future Soil Monitoring and Resilience Directive needs to recognize this broad spectrum of soil needs.
- We recommend formalizing the stakeholder participation to address soil needs by setting up national hubs.
- Effective national hubs are 'owned by an authority' and have as an objective to i) inform national policy makers on soil challenges and policy needs; ii) debate policy proposals and their implementation and iii) provide feedback on anticipated impact of proposed policies.

Synergy with other initiatives/entities and EU Mission Soil & projects



Soil Health
BENCHMARKS

AI 4 Soil
Health



InBestSoil



GLOBAL SOIL
PARTNERSHIP



EUROPEAN SOIL
PARTNERSHIP

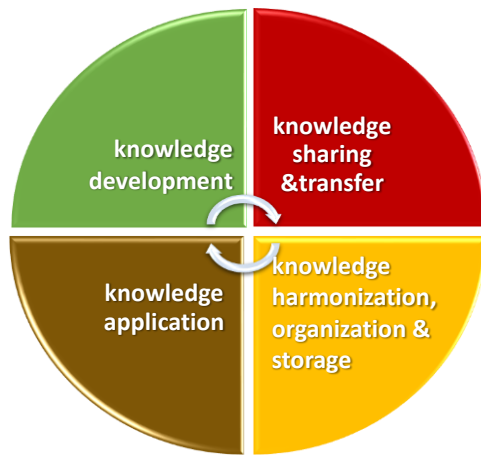


BONARES



European
Environment
Agency

Objectives of this week



- Inform each other of results / achievements / ongoing activities
- Learn : science, data management, etc
- Synthesizing results, reflect on major cross-cutting issues and elaborating main messages
- Position our activities in relation to the soils policy context
- Strengthen our network, prepare the future



MONDAY 10/6 – morning meetings and plenary afternoon opening					
9:00	Registration for first attendees (going to morning meetings)				
9:30 am	Project meetings, NCR/PCR meeting				
12:00pm	Registration + lunch				
1:00 pm	Opening of the event by Claire Chenu and Anna Besse				
1:30 pm	Welcome by organizing partner LAMMC				
1:35 pm	Presentation by a representative from the Lithuanian Ministry of Agriculture				
1:50 pm	Keynote speech "Soil futures - emerging drivers and needs of soil management and soil services" by EJP SOIL Advisory Board Chair Katharina Helmig;				
2:30 pm	Coffee break				
2:35 pm	Breakout sessions GROUP A				
A1: Carbon sequestration at national and European scale and effects of policy and socio-economic factors	A2: Leveraging different approaches in the development of farmer-friendly tools or sustainable soil practices and schemes	A3: Implementing Science in EJP SOIL	Open		
5:15 pm	Keynote speech by WWF Professor of Agroecology and Sustainable Landscapes at Groningen University Pablo Tittonell				
5:55 pm	End of day 1				

TUESDAY 11/6 – project breakout sessions				
9:00 am	Breakout session GROUP B (part 1)			
B1: C-sequestration and trade-offs	B2: External organic matters for circular economy	B3: Indicators for soil ecosystem services		
10:15 am	Coffee break			
11:00 am	Breakout session GROUP B (part 2)			
B1: C-sequestration and trade-offs	B2: External organic matters for circular economy	B3: Indicators for soil ecosystem services		
12:00 pm	lunch			
1:15 pm	Breakout session GROUP C (part 1)			
C1: C-sequestration, roots and amendments	C2: Soil biodiversity and ecosystem services	C3: Sustainable soil management	C4: Innovation and methods for data acquisition	
2:15 pm	Coffee break			
2:45 pm	Breakout session GROUP C (part 2)			
C1: C-sequestration, roots and amendments	C2: Soil biodiversity and ecosystem services	C3: Sustainable soil management	C4: Innovation and methods for data acquisition	
3:45 pm	Poster session with guided tours through "Poster islands"			
5:30 pm	End of poster session with drinks			

Wednesday 12/6 – WP breakout sessions + field trip			
9:00	Parallel workshops		
Science to Policy workshop	Science to Advisors workshop	National Coordinators session	
10:30 am	Short coffee break		
10:50 am	Young scientists summarize poster session + awards for best posters		
11:35 am	Walk to train station, lunch on train transport to field trip		
2:00 pm	Field trip and social dinner		
11:00 pm	End of day 3 (estimated arrival back in Vilnius)		

Thursday 13/6 – plenary ASD/GM closing	
9:00 am	Plenary opening: introduction of themes
9:15 am	Session on Carbon Sequestration theme with input from projects, policymaker and possibly stakeholders + discussion with audience
10:45 am	Coffee break
11:15 am	Session on Monitoring Soil Health theme with input from projects, policymaker and possibly stakeholders + discussion with audience
12:45 pm	Lunch
1:45 pm	Session on Sustainable Management theme with input from projects, policymaker and possibly stakeholders + discussion with audience
3:15 pm	Closing session on EJP SOIL follow-up
4:00 pm	OFFICIAL END OF ASD/GM 2024 and coffee break
4:30 pm	Invite only: Implementation of the EU Soil Monitoring Directive in Member States: approach and challenges (discussion session, co-organised with EJP SOIL programme owners)
6:00 pm	End of day 4

Contribution wanted / online questionnaires:

- Prioritization of the knowledge gaps to focus on for sustainable agricultural soils by 2050 (WP7)
- Strategic agenda for agricultural research in Europe 2025-2035 (WP2)

Have a productive and friendly week !

