



EJP SOIL: Introductie

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Wageningen, WICC, 4 december 2024



EJP SOIL
European Joint Programme



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funding from the European
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and innovation programme
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652615.

Op weg naar een klimaatlim en duurzaam beheer van landbouwbodems

Waarom?

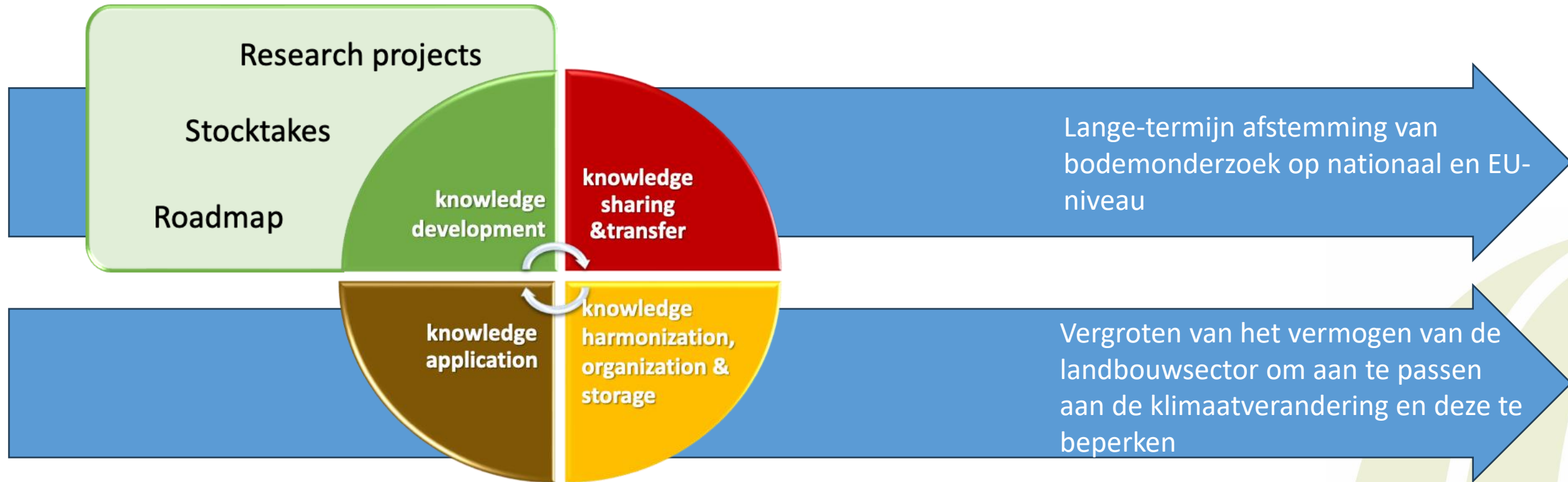
- Stimuleren van **bodemonderzoek**; organiseren van **onderzoeksgemeenschap** in Europa
- Vergroten van het vermogen van **de landbouwsector** om aan te passen aan de klimaatverandering en deze te beperken
- Lange-termijn **afstemming** van bodemonderzoek op nationaal en EU-niveau

Hoe?

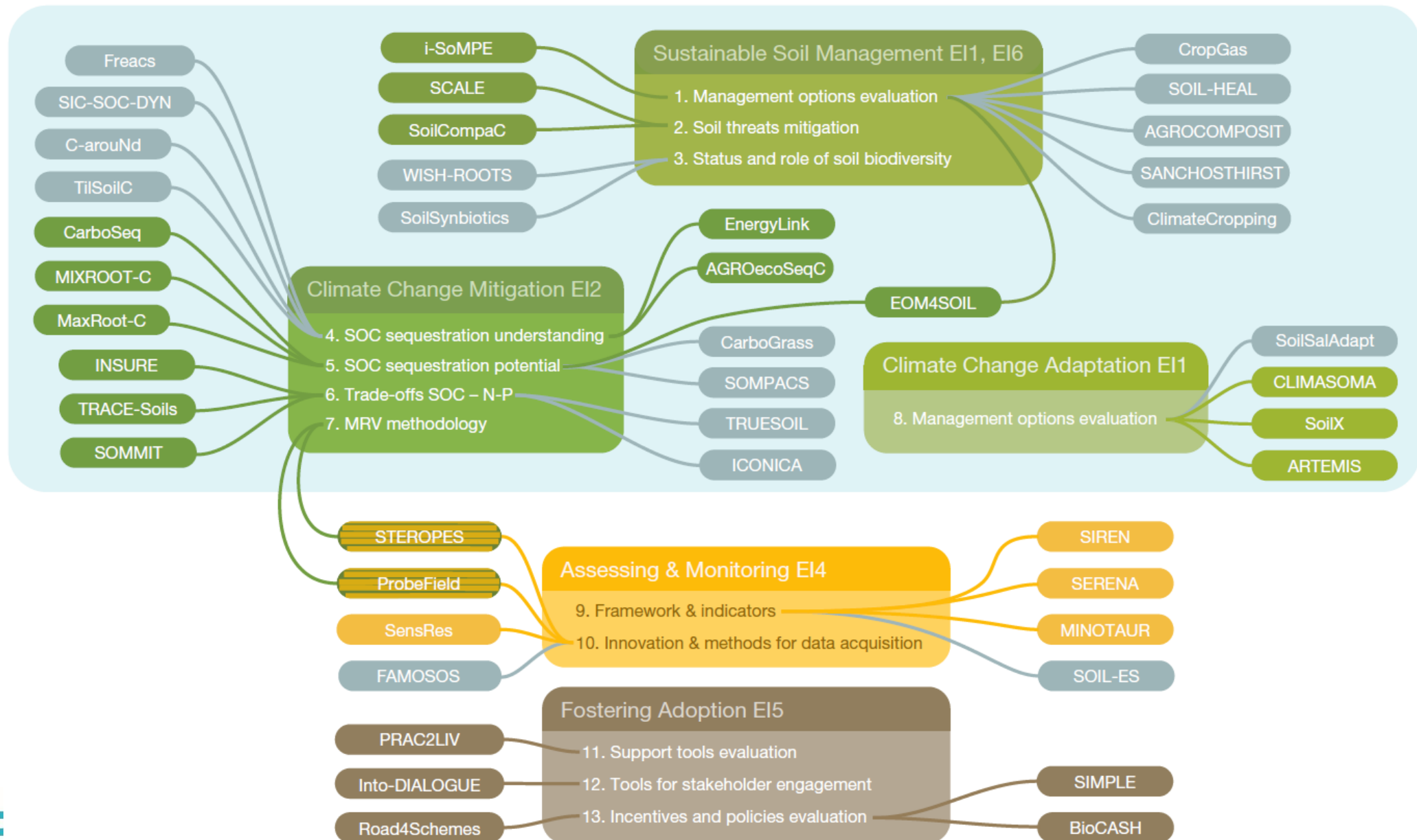
- 2020-2025
- European Joint Programme
- 80 M Euro
- Co-fund van de EC en landen
- Network van 24 landen
- Bijna 1000 onderzoekers



European Joint EJP SOIL: towards climate smart and sustainable management of agricultural soils



EJP SOIL: landschap van onderzoeksprojecten



EJP SOIL publicaties

Quartiles	Publications ?	Publication share (%)
 Q1 (top 25%)	110	85.9
 Q2 (26% - 50%)	16	12.5
 Q3 (51% - 75%)	2	1.6
 Q4 (76% - 100%)	0	0.0

Deliverables:

- 113 in WPs
- 545 in projects

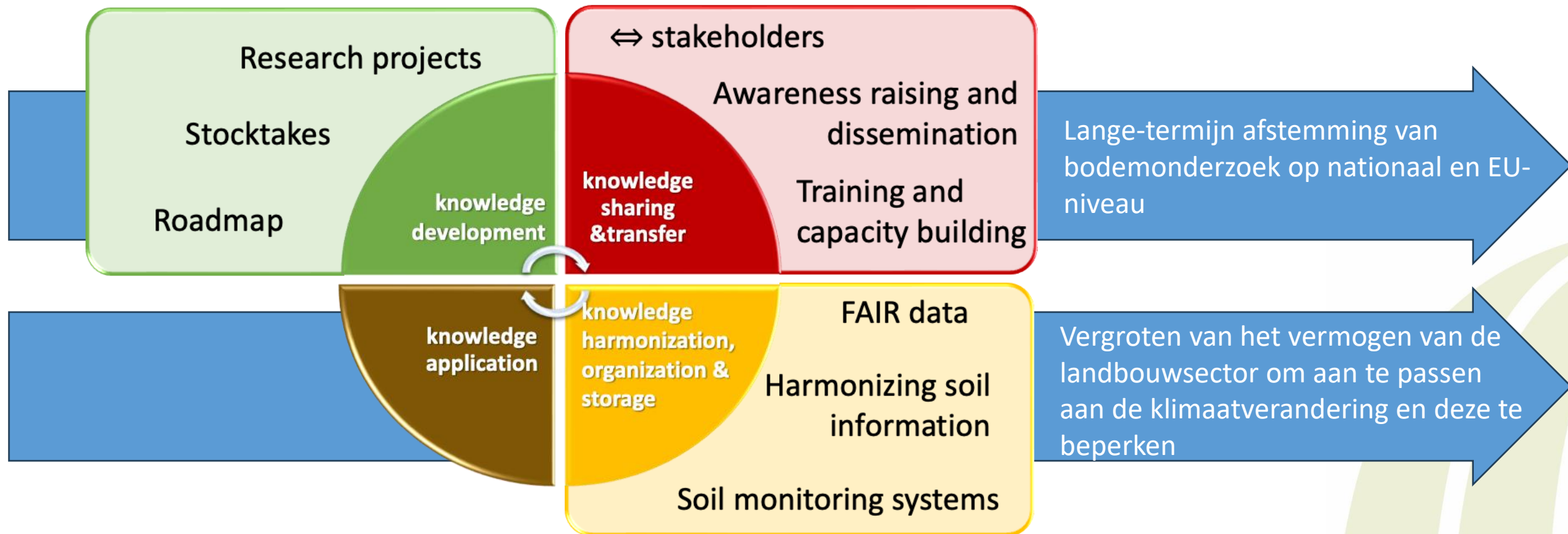
180 peer-reviewed artikelen

Meer in 2025!

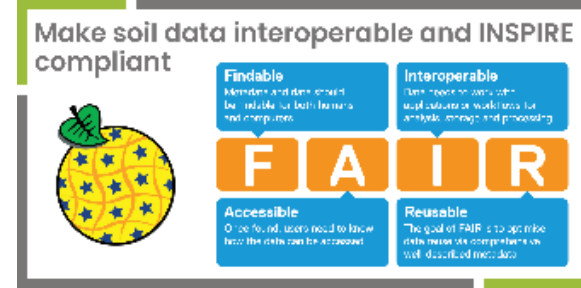
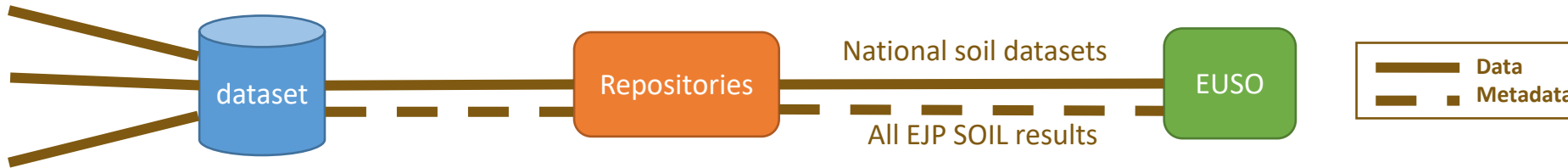
Data uit Scopus

x3 EJP SOIL special issues in
European Journal of Soil
Science

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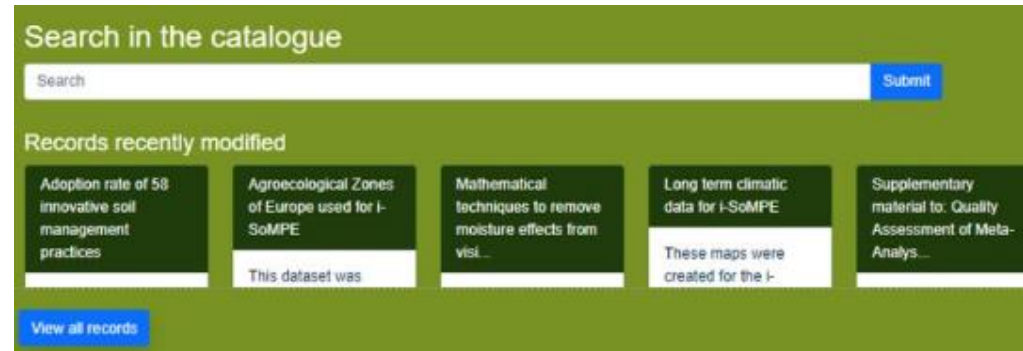


Tools voor bodemdatabeheer en -deling



- [Metadata catalogue](#):

- Data uit EJP SOIL
- Nationale datasets
- In totaal: 555 datasets



- [Wiki](#) with guidance on soil data provisioning options



- [Template](#) for standardized relational database model based on ISO 28258



- [Codelists](#): standardized machine-readable definitions & vocabularies

- [Geopackage](#): for 'INSPIRE-compliant' soil data exchange



The Geopackage format is SUPPORTED BY EEA TO BE USED FOR environmental data reporting



An open-source metadata dataset van lopende Europese mid- en langetermijn veldexperimenten

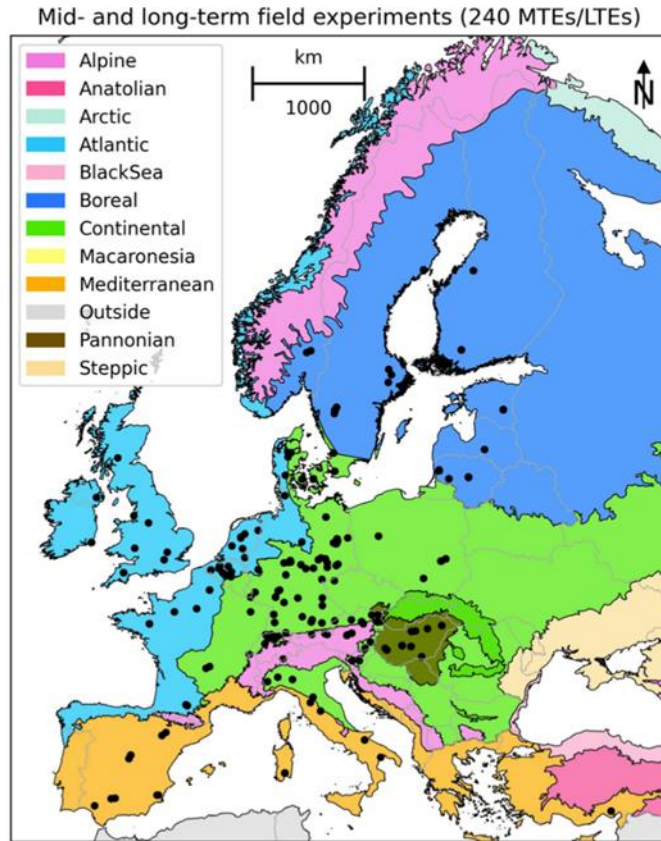


FIGURE 3 Distribution of the collected mid- and long-term field experiments across Europe with European biogeographical regions.

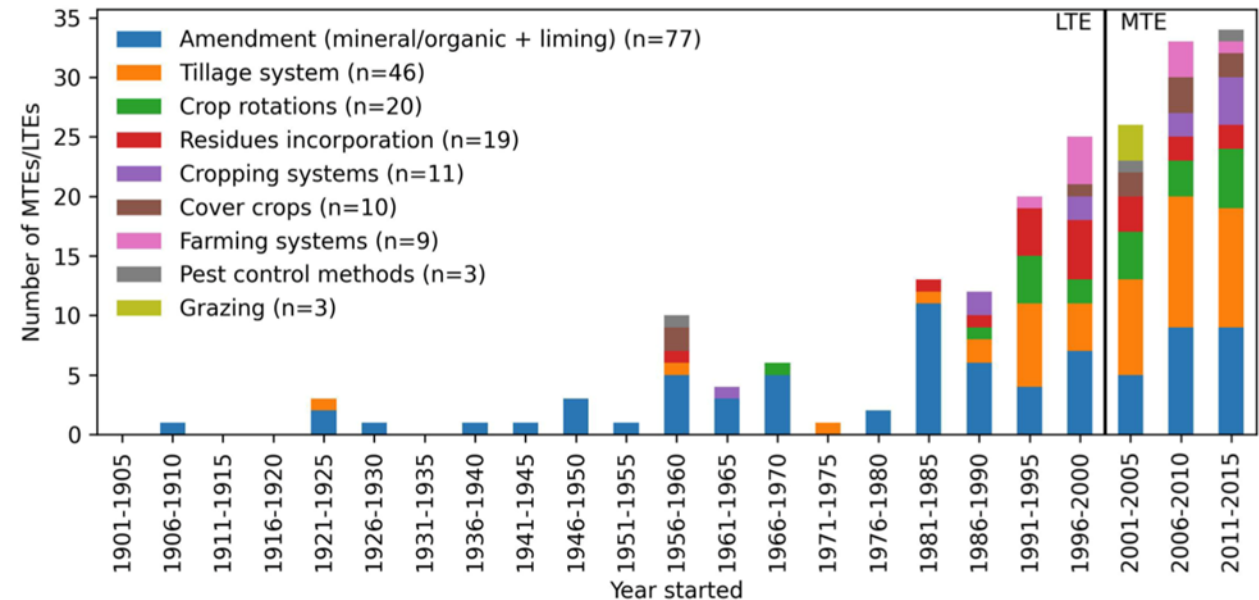


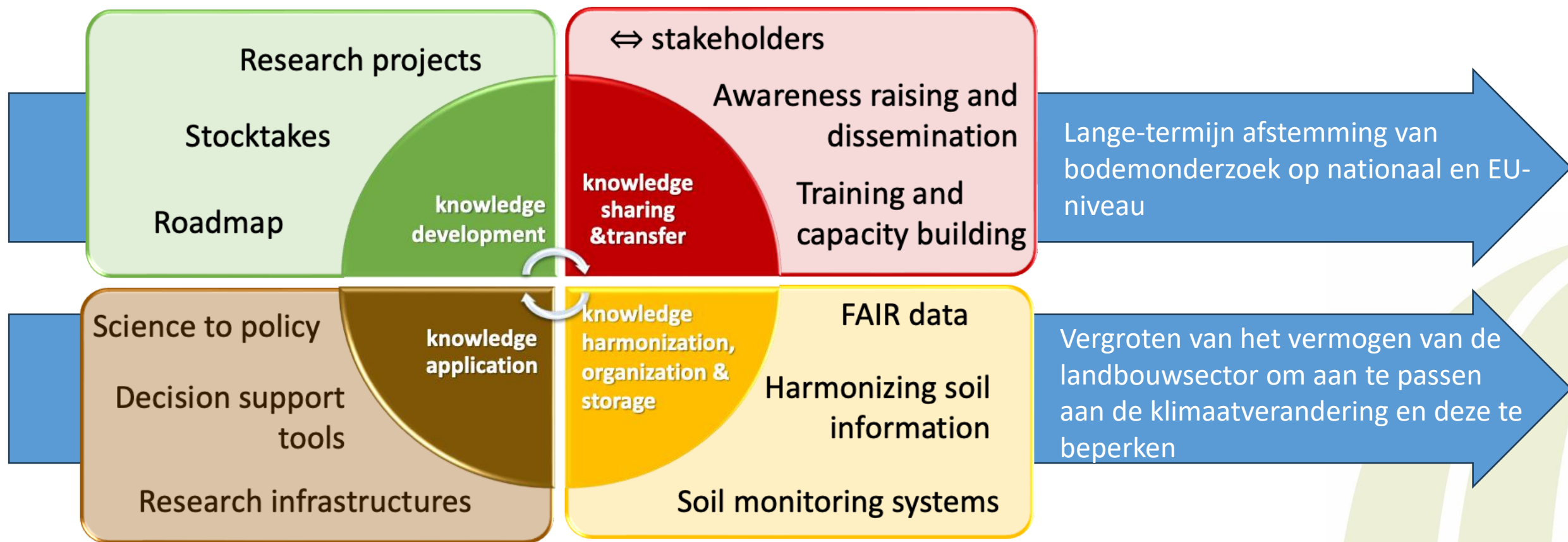
FIGURE 6 Evolution of newly started MTEs/LTEs with respect to their research themes. Note that one MTE/LTE can have several research themes (e.g. it can investigate both tillage and cover crops) and hence can be counted multiple times. The research theme about 'amendments' includes experiments that investigate 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>

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EU Carbon Removals and Carbon Farming framework

DG CLIMA CRCF Expert group

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

EJP SOIL 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, findings to better inform future decision making.

EJP SOIL WORK PACKAGE 8 SCIENCE TO POLICY

Policy Brief
DECEMBER 2023

When does soil carbon contribute to climate change mitigation?

Axel Don, Felix Seidel, Jens Lefeld, Thomas Kätterer, Manuel Martin, Sylvain Pellerin, David Emde, Daria Seitz, Claire Chenu

- EJP SOIL clarifies definitions around carbon (C) sequestration in soils
- C sequestration in soils requires a global increase in soil C stocks
- In many European croplands we can only achieve reduced C losses (C loss mitigation), not C sequestration in soils, via improved agricultural management
- Leakage may easily offset positive climate impacts of increased soil C
- Soil C stocks need to be increased (SOC accrual) for climate change mitigation – unchanged C stocks (SOC storage) have no direct climate benefit

EJP SOIL Road4Schemes

Policy Brief
MAY 2024

Towards a regulation on carbon removals in the EU: lessons learned from existing experiences

Crisoueli I., Galotti F., Martelli A., Falconi I., Dara Guccione G., – CREA, Herregard, Thorsteir M., – AU

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

EU Soil Monitoring Directive

DG ENV Soil Strategy Expert group

EJP SOIL 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

511 deelnemers >1.600 views

THE EU PROPOSAL FOR A LAW ON SOIL
WEBINAR AUDIENCE COMPOSITION

511 ATTENDEES

Other 20.9%
Policy 19.8%
Research 59.3%

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 2023-11-03

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

SOIL MONITORING SYSTEMS
Challenges / recommendations towards harmonization

- 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

DIFFERENT SAMPLING STRATEGIES, DESIGNS AND PROTOCOLS BETWEEN SMS

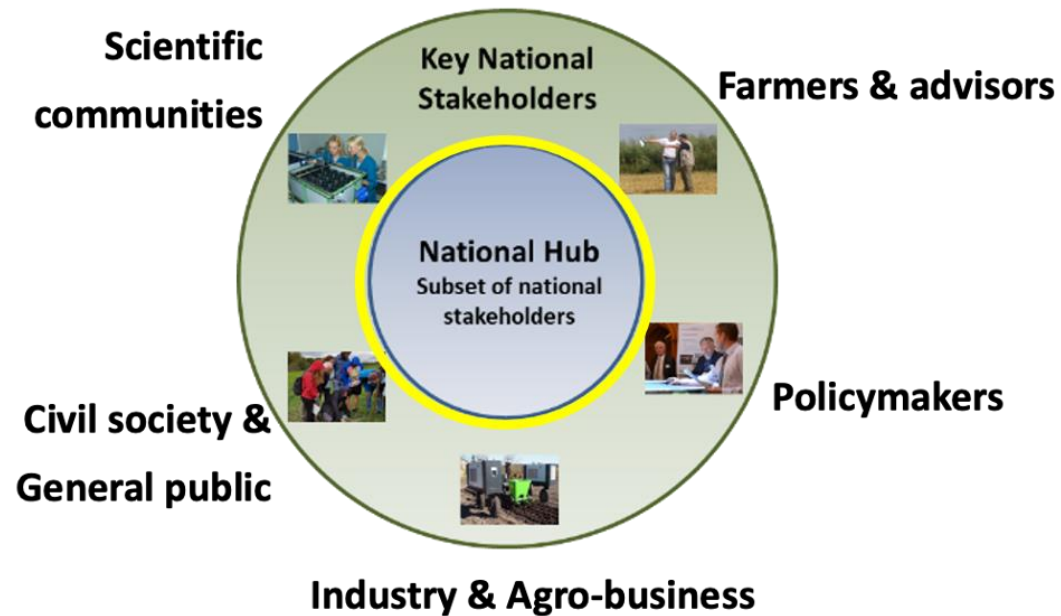
A transversal analysis was made to identify similarities and differences between the 27 reported SMS (collected from 18 countries). Most SMS were developed and started in the nineties to monitor soil quality. Agriculture is the main land use investigated in our survey. Forestry regularly has its own 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).

EU CAP 2023-2027

Inception report

'AT 12 QUANTIFICATION OF ROUGH ESTIMATES – SOIL'

EJP SOIL National Hubs: een nieuw instrument voor de structurele consultatie van stakeholders & voor science - policy interface



NHs zijn gevestigd in alle 24 EJP SOIL landen

- Geven van feedback
 - Verwoorden van de nationale positie en behoefte
 - Leren van de resultaten en bijdragen aan inzichten en beleid
-
- De bodembehoeften zijn stakeholder- en regiospecifiek: NHs verschillen tussen de landen
 - EJP SOIL NHs vormen een goede basis voor Soil Mission mirror groups



Policy Brief

December, 2023

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.

EJP SOIL Final Policy Forum: November 18, 2024, Brussel



EJP SOIL
European Joint Programme

The Final EU Policy Forum

HEALTHY SOILS FOR EUROPE

The contribution of
EJP SOIL at the science to policy interface

-  **CARBON SEQUESTRATION AND THE CARBON REMOVALS AND CARBON FARMING REGULATION**
-  **SOIL DATA AND THE SOIL MONITORING LAW**
-  **SUSTAINABLE SOIL MANAGEMENT OPTIONS AND THE COMMON AGRICULTURAL POLICY**

