EJP SOIL
European Joint Programme

Towards climate-smart sustainable management of agricultural soils

Deliverable 8.11

Second report on synergies developed

Due date of deliverable: M36
Resubmission date: 29.09.2023

GENERAL DATA

Grant Agreement: 862695
Project acronym: EJP SOIL
Project title: Towards climate-smart sustainable management of agricultural soils
Project website: www.ejpsoil.eu

Start date of the project: February 1st, 2020
Project duration: 60 months
Name of lead contractor: INRAE

Funding source: H2020-SFS-2018-2020 / H2020-SFS-2019-1
Type of action: European Joint Project COFUND

DELIVERABLE NUMBER:	8.11
DELIVERABLE TITLE:	Second report on synergies developed
DELIVERABLE TYPE:	Report/ORDP/Website/Ethics
WORK PACKAGE N:	WP8
WORK PACKAGE TITLE:	Science to Policy
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REVIEWED BY:	
DISSEMINATION LEVEL:	PU
COPYRIGHT:	CC-BY
DOI:	10.18174/652166

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WP Work Package
EU European Union

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1. Executive Summary

EJP SOIL Sub-Task 8.1.2 is concerned with "exploitation of synergies with related initiatives" and involves identifying potential projects, initiatives and networks (referred to collectively as entities) with which synergies can be fostered and exploited. This task is being carried out with a particular focus on developing synergies that support and enlighten soil related policy, either by engaging with the policy facets within the identified entities or by translating relevant scientific evidence based findings into recommendations for the policy sphere.

This second report on synergies developed details the progress to date and engagement activities within the synergies developed. Since the "first report on synergies developed" (D8.6, M18) where the status of existing interactions between the EJP SOIL and external entities were outlined, the scope for the selection of entities has been further developed and clearly defined and recommended steps for developing and leveraging effective synergies with entities is presented. Development of the scope for this work and focus areas for developing synergies was conducted by core working group of work package (WP) 8 participants (Teagasc, WUR, CREA and EV-ILVO,) in consultation with EJP SOIL work package (WP) leaders, the EJP SOIL Steering Committee and Board of Programme Managers (BPM).

Six key areas of focus have been identified from this feedback were cross referenced with previously identified knowledge gaps under the EJP SOIL Expected Impacts (EIs) discussed in detail in D2.4[1] as well as the policy summary of D7.1[2]. This allowed for the identification of overlapping areas of focus e.g. C sequestration, ecosystem services, integrated policy approach. These key areas cover Carbon farming, Rewetting peat soils, EU Soil Health Law, Avoiding land degradation, Soil biodiversity and Soil data.

Interactions between the EJP SOIL with external entities covering most of these key areas of focus have been developed in at both programme level, as well as at Member State (MS) level through partners and the NCR's and are outlined in this report. Information and examples of the types of successful interactions that have taken place are outlined and the intention of EJP SOIL is to foster and exploit further synergies with these entities into the future. A key interaction that has occurred and that is continuing to be fostered is that between the EJP SOIL and the newly formed EU CAP Network. This synergy was initiated in M32 and was followed up on in M34, future planned activities for leveraging this synergy are discussed later in this report.

A proposed approach for leveraging synergies across the EJP SOIL Programme have been outlined in this report. This approach was devised and presented in such a way as to ensure it can be implemented across the EJP SOIL Programme. Existing synergies reported on herein will continue to be leveraged and developed over the lifetime of the Programme to ensure the continued dissemination and promotion of the scientific findings of the EJP SOIL Programme across networks throughout the EU and the EJP SOIL participating partners.

[1] EJP SOIL Deliverable 2.4 Roadmap for the European Joint Programme SOIL
[2] EJP SOIL Deliverable 1.7 2nd Annual Work Programme and 1st Summary progress report

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2. Introduction

Over the duration of the EJP SOIL Programme the WP8 Task 8.1 which aims to 'Connect & Synergise' the EJP SOIL with policy stakeholders at all levels, including with policy stakeholders involved in other initiatives that have similar areas of focus to the EJP SOIL "to support climate smart and sustainable soil management" and that will endure over the lifetime of the programme. Sub-Task 8.1.2 Exploitation of synergies with related initiatives, specifically deals with identifying active projects, initiatives and networks (collectively referred to within this deliverable as entities) outside of the EJP SOIL that have potential for collaboration and synergy creation with the EJP SOIL activities. As part of WP8, this task is carried out with a particular focus on the soil related policy perspective of these synergies, either by engaging with the policy facets within the identified entities or by translating relevant scientific evidence based findings into recommendations for policy makers.

This report, (Deliverable 8.11) is the second report generated in Sub-Task 8.1.2, and provides an update on the existing interactions between the EJP SOIL and external entities and examines the synergies between the EJP SOIL and these external complementary entities with a focus on the policy related aspects of the work being done e.g. agreeing on common policy language, standardised thresholds etc. A review of the existing interactions was completed with feedback from the EJP SOIL WP Leaders on the synergies developed at European scale in their respective work packages. At a National level policy stakeholders from various ministries and organisations have also been engaged to participate in policy discussions about carbon sequestration, rewetting peat soils, monitoring and reporting on soil health status at the science to policy interface.

This report further aims to set out the scope of Sub-Task 8.1.2 and presents the stepwise approach for current and future activities that exploit synergies between the EJP SOIL and complementary entities.

The EJP SOIL Programme covers a wide range of topics targeted at climate smart sustainable management of agricultural soils and so the possible synergies are quite numerous. Ensuring a clearly defined and well thought out scope for this task is key to making certain that the synergies to be facilitated are relevant and best suited to the needs of the programme. Areas of focus for building synergies with initiatives were initially identified in D8.6 "First report on synergies identified" and further refined during discussions with the EJP SOIL Steering Committee and board of programme managers (BPM) over years 2 and 3. Key focus areas for developing synergies have been prioritised taking account the need to fully align with the EJP SOIL expected impacts and also with current soil related policy needs.

EJP SOIL EI 1 – Fostering understanding of soil management and its influence on climate change mitigation and adaptation, sustainable agricultural production and environment.

EJP SOIL EI 2 - Understanding how soil-carbon sequestration can contribute to climate change mitigation at the regional level and accounting for carbon.

EJP SOIL EI4 – Supporting harmonized European soil information, including for international reporting.

EJP SOIL EI 5 – Fostering uptake of soil management practices which are conducive to climate change adaptation and mitigation

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In addition to developing synergies within these defined areas, the need for leveraging synergies with complementary initiatives was also identified to better reach a wider audience, including networks of farmers, advisors and agri-tech start-ups. To build on this, synergies with organisations such as the EU CAP Network were prioritised so as to be able to engage with a wider stakeholder audience which includes these groups.

These synergies require specific alignment of scientific subject matter, target audience and aims and objectives between the EJP SOIL and the entity under consideration, to ensure communication of information and exchange of ideas and resources are relevant for both. An initial focus on entities working at global and EU scales was decided, and this will be followed by consultation at MS level with the National Hubs to determine possible entities that fit the established criteria at a regional or local scale. To support and leverage the development of these synergies, a stepwise approach is presented in this report which is shared within the EJP SOIL consortium to help facilitate mutually beneficial relationships between the EJP SOIL Programme and the identified external entities.

Exploiting these synergies is key to ensuring that the EJP SOIL establishes linkages with other long term networks and programmes to ensure dissemination of the work that the EJP SOIL is continuing to do. It places the EJP SOIL as an important source of novel and relevant scientific findings related to “climate smart and sustainable agricultural soil management” within a global and European contexts. Such interactions serve to connect and synergise the research being done across various topics but also the effective transfer of the scientific findings being generated into the policy sphere at various scales. Many of the synergies developed will help facilitate science to policy communication, and to make use of the valuable research and synthesis information being generated in the EJP SOIL. This scientific information is being used to inform and support policy development, train and up-skill farm advisory services and agri-industry personnel, underpin implementation of soil management best practice at farm level and identify new research required to further develop climate smart and sustainable soil management. Interactions between the EJP SOIL Programme and other complementary projects, networks and initiatives will also contribute directly to EI5 of the EJP SOIL Programme ‘Fostering the uptake of soil management practices conducive to climate change adaptation and mitigation.’

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3. Existing Synergies

This section reports on the current existing synergies and what has been done up to M36 to leverage these relationships to the benefit of both parties. Synergies are presented at three levels:

1. **Programme level** – These represent relationships with external entities that have been initiated by the EJP SOIL Programme as a whole to foster information exchange and dissemination of findings to a wider audience at EU level.
2. **Member State level –** These represent relationships with national policy makers and organisations that have been initiated / facilitated by national communication representatives (NCR's) or EJP the SOIL WP8 Science to Policy. The aim of these synergies is to engage national level policy stakeholders to participate in forums or workshops on national level policy issues.
3. **EJP SOIL Work Package level –** These represent relationships between individual EJP SOIL Work Packages (WP) and external entities to leverage synergies and facilitate information exchange specifically related to WP activities.

3.1. Programme Level

3.1.1. EU CAP Network

An initial meeting with a representative from EIP – Agri was held in M32 to initiate a relationship with EJP SOIL and the soon to be newly launched EU CAP Network. Subsequent to this meeting, members of EJP SOIL WP8 attended the launch of the EU CAP Network. In M34, WP8 held a meeting with all EJP SOIL WP3 Project Communication Representatives (PCRs) during which the opportunity to collaborate and make use of the EU CAP Network stakeholder audience and operational groups when completing project activities requiring stakeholder engagement was presented to all PCRs.

Future activities to further leverage this synergy will include:

- Dissemination of EJP SOIL translated scientific findings to EU CAP Network stakeholders
- Joint session between EU CAP Network and WP8 at EJP SOIL Annual Science Days 2023
- Meetings between EJP SOIL Projects and the EU CAP Network Biodiversity Operational group

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3.1.2. European Geosciences Union

A range of projects from within WP3 of the EJP SOIL Programme have applied to convene sessions at the European Geosciences Union General Assembly in April 2023. This represents the leveraging of the relationship between the EJP SOIL and the EGU to disseminate the scientific findings of the projects to a wider EU audience and promote the work of the EJP SOIL Programme. Currently there are three sessions to be convened by EJP SOIL internal project members which align with the focus areas identified for synergies in this report and the expected impacts of the EJP SOIL.

Figure 1 Description of the session on trade-offs between soil carbon sequestration, GHG fluxes and N and P losses: implications for agriculture management

Figure 2 Description of the session on soil indicators for assessing ecosystem services and soil health status.

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Figure 3 Description of the session on incentives for carbon farming.

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3.1.3. The Directorate Generals

During Year 3 of the EJP SOIL Programme WP8 has endeavoured to establish and leverage a relationship with the European Union Directorate Generals (DGs). This is one of the most important synergies EJP SOIL can facilitate with respect to policy as the DG's are crucial in establishing EU policy. Throughout Year 3, WP8 has collaborated with various DGs for several EJP SOIL events listed and described in below.

DG	EJP SOIL Event	Actions	Month
Climate Action	Regional Policy Workshop on Rewetting Peat Soils	Presentation by member of DG Climate on Carbon Cycles	M27
Climate Action	EU Workshop on Carbon Farming	Presentation by member of DG Clima, Q&A Session on policy developments for carbon farming schemes in the EU	M28
Agriculture and Rural Development	EU Workshop on Carbon Farming	Presentation by member of DG Agri Q&A Session on policy developments for carbon farming schemes in the EU	M28
Agriculture and Rural Development	EJP SOIL General Meeting	Participation and presentation in WP8 Session	M29
Environment	EJP SOIL General Meeting	Participation and presentation in WP8 Session	M29
Environment	2nd EU Policy Forum	Discussions and input on timing of forum, feedback on content to align with upcoming EU Soil Health Law	M32 onwards
Environment	EJP SOIL Network	Promotion of opportunity for public consultation on EU Soil Health Law among EJP SOIL Consortium, National Hubs and WP3 Projects	M32

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3.2. Member State Level

3.2.1. Regional Workshop on Rewetting Peat Soils

In M27, WP8 facilitated a regional workshop on the topic of rewetting peat soils. At this workshop, policy stakeholders from nine EU countries were invited to participate at this event. Table 1 below lists the countries and national level policy organisations which made presentations at this workshop and contributed to the discussion on the status of peat soils in their respective countries and the current and future policies in place to support the conservation of peat soils and their potential rewetting.

Country	Job Title (of Presenter)	Organisation
Sweden	Environmental Objectives Coordinator	Swedish Board of Agriculture
Lithuania	Advisor to the Minister of Climate and Nature	Ministry of Agriculture
Switzerland	Biologist/ ecological Engineer	LIN'eco, partner to Federal Office for the Environment
Germany	Policy Officer	Federal Ministry of Food and Agriculture
Ireland	Assistant Agricultural Inspector	Department of Agriculture, food and the Marine
Finland	National Policy maker	Ministry of Agriculture and Forestry
Denmark	Team Leader	Danish Agricultural Agency
Netherlands	Program Director of the Dutch National Peatland Program	Dutch Ministry of Agriculture, Nature and Food Quality
Norway	Advisor	Norwegian Environment Agency

Table 1 List of national level organisations with which synergies were leveraged around the topic of rewetting peat soils.

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3.2.2. Latvian National Workshop

In M27, the NCR of Latvia convened a national level workshop under WP8. At this workshop policy stakeholders participated to discussions surrounding policy needs for data harmonisation and reporting on GHG emissions from organic soils. A summary report was prepared after the workshop by the NCR of Latvia and shared with WP8.

National Level Organisations in Latvia
Association (union) "Farmers' Saeima" (*in english – Farmers Parliament*).
Ministry of Agriculture of the Republic of Latvia.
Ministry of Environmental Protection and Regional Development of the Republic of Latvia.
State Plant Protection Service.
State Land Service.
Rural Support Service.
University of Latvia, Faculty of Geography and Earth Sciences.
Latvia University of Agriculture.
State Forest Research Institute “SILAVA”

Table 2 List of national level organisations in Latvia with which synergies were leveraged in year 3 of the EJP SOIL Programme

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3.2.3. Austrian National Workshop

In M27, the NCR of Austria worked in collaboration with WP8 to develop an agenda and hold a national level workshop on the science to policy interface in Austria. The national level organisations that had representatives who attended this event are listed in Table 3. These organisations participated in active discussions on science to policy in Austria. A summary report of the outcomes of event was produced and then shared with EJP SOIL WP8. This report will inform decisions of WP8 with respect to policy development and dissemination of scientific findings.

National Level Organisations in Austria
BMK - Ministry
Regional Government (Steiermark)
University (BOKU)
FCIO - Industrial Association
Regional Government (Salzburg)
BMLRT - Ministry
VERMIGRAND - organic Farmer
AGES - Agency for health and food security
Regional Government (Tirol)
Regional Government (Niederösterreich)
Regional Government (Oberösterreich)
BFW - Austrian Research Centre for Forests
FFG - Austrian Research Promotion Agency
Regional Government (Wien)
BAW - Ferderal Agency for Water Management
Regional Government (Burgenland)
Regional Government (Vorarlberg)
UBA - Environment Agency Austria
Regional Government (Vorarlberg)
University (UIBK)
AGRANA - Industrial Company
BAB - Federal Institute of Agricultural Economics, Rural and Mountain Research
Natur im Garten - limited liability company (promoting garden biodiversity)

Table 3 List of national level organisations in Austria with which synergies were leveraged in year 3 of the EJP SOIL Programme

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3.3. EJP SOIL Work Package Level

This section presents some of the most important existing synergies within the EJP SOIL consortium WPs. This list will continue to grow as the EJP SOIL Programme continues and will be built upon in D8.12 Third report of synergies developed in M56.

Work Package	Topic Area	Organisation Involved	Actions	Timing
WP 1	EU Soil Health Law	DG Env	Contribution to the call for evidence for the EU Soil Health Law	M26
WP 2	Publication of a paper on EJP SOIL expected impact 4	EUSO, LUCAS	Attending meetings and webinars. Communication and feedback with EUSO	M16 onwards
WP 2	Creation of the 10 year Roadmap	ORCASA, SOLO	Meetings to ensure alignment of road mapping activities with other projects in the soil deal for Europe	M30 onwards
WP 7	Knowledge Transfer	SHOWCASE, AGRIDEMO & AGRILINK projects	Workshop held to identify synergies and disseminate knowledge developed in EJP SOIL to farm advisors	M35
WP 7	Knowledge development and transfer	Bonares Database	Collaboration to share and store long-term experiment meta-data in the Bonares database	M18 onwards
WP 7	Knowledge transfer and application	GLOSOLAN	The EJP SOIL network of laboratories will be included in the Glosolan database	Future activity in Year 4
WP 8	Carbon Sequestration (Carbon farming,	DG Climate	Participation and presentations at WP8 policy workshops	M27, M28

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	Rewetting peat soils)	DG Agri	Participation and presentations at WP8 policy workshops	M27, M28
WP 8	Soil Health Law	DG Env	Participation and presentation at EJP SOIL General Meeting 2022.	M29
			Consultation on possible EJP SOIL contributions to draft of proposal	M32
			Dissemination of EU survey for public consultation for soil health law	M32
WP 8	Networking	EIP-Agri / EU CAP Network	Initial meeting to discuss avenues for leveraging synergies including shared access to stakeholders	M32

Table 4. Existing Synergies in EJP SOIL work packages

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4. Leveraging current and future synergies

4.1. Identified Focus Areas

Areas of focus for developing synergies were identified and described in D8.6 report and internal and external discussion/ interactions that the EJP SOIL has had over the time. The key areas of focus identified are as follows;

Carbon Farming - Understanding how soil-carbon sequestration can contribute to climate change mitigation at the regional level and accounting for carbon.

Rewetting peat soils – Fostering understanding of soil management and its influence on climate change mitigation and adaptation, sustainable agricultural production and environment.

EU Soil Health Law – Fostering uptake of soil management practices which are conducive to climate change adaptation and mitigation

Avoiding land degradation - Fostering understanding of soil management and its influence on climate change mitigation and adaptation, sustainable agricultural production and environment.

Soil biodiversity - Fostering understanding of soil management and its influence on climate change mitigation and adaptation, sustainable agricultural production and environment.

Soil Data – Supporting harmonized European soil information, including for international reporting.

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4.2. Recommended Steps to Leverage Synergies

Described in this section are the recommended steps proposed for leveraging synergies between the EJP SOIL Programme and other external related/complementary initiatives. These recommendations are by no means prescriptive and are open to modification based on the variable involved in leveraging synergies such as the topic, identified entities and the current political climate at the time of leveraging the synergy.

1. Identify a focus area that is in line with the EJP SOIL Expected Impacts.
2. Perform a needs analysis on this topic to identify knowledge needs.
3. Identify those projects within the EJP SOIL programme that are working on addressing the focus area identified.
4. EJP Soil Partners hold a forum/workshop/webinar for policy makers on this topic that allows views from various types of stakeholders involved to be exchanged and communicated.
5. Create a list of the existing and potential future findings from the EJP SOIL projects that are relevant to the focus area.
6. Identify which project results, initiatives or networks from the inventory compiled and presented in D8.6 and from ongoing interactions between EJP SOIL and external organisations, can be linked to which organisation for maximum utilisation.
7. Translate the findings into a format suitable for communication and dissemination to the identified projects, initiatives or networks.

4.3. Current Status of Synergies within the identified focus areas

The scores in Figure 4 assigned to each identified focus area correspond to the stage synergies have reached based on the steps presented in Section 4.2 Recommended Steps to Leverage Synergies. Each score indicates what step has been reached for each of the topics presented here e.g. carbon farming is at Step 6 Identify which project results, initiatives or networks from the inventory compiled and presented in D8.6 and from ongoing interactions between EJP SOIL and external organisations, can be linked to which organisation for maximum utilisation.

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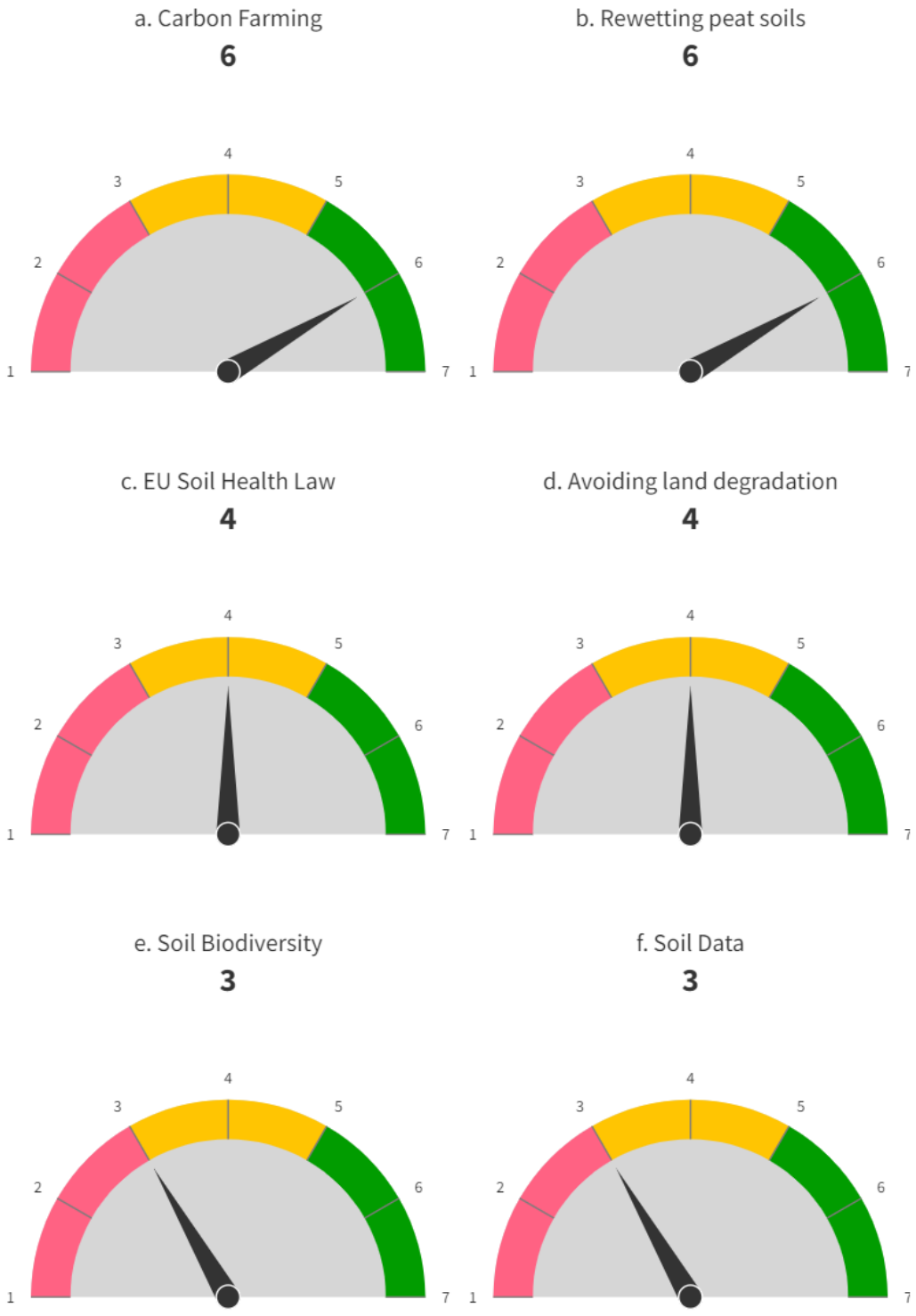

Figure 4 Identified focus areas and the current stage synergies are at based on the recommended steps proposed.

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5. Conclusion

The scope for developing synergies between the EJP SOIL and entities with similar objectives and interests has been developed and expanded upon in this report, including several key synergies that were initiated and leveraged throughout Year 3 of the EJP SOIL Programme most significantly with the EU CAP Network and the EU DG's.

This report also outlines the proposed approach for identifying, generating and sustaining beneficial and effective synergies between EJP SOIL and external entities. This approach was developed in such a way as to ensure it can be implemented not only by the Science to Policy work package but across all work packages and projects within the EJP SOIL Programme when they begin leveraging their own synergies. The catalogue of existing synergies is also included in this deliverable and highlights the various synergies that are being leveraged at an EU and National level as well as within different WP's of the EJP SOIL consortium.

In addition, key areas of focus have been identified in consultation with the EJP SOIL WP's and steering group and discussion with EU and National policy stakeholders to identify critical needs and opportunities. These include six key science to policy focus areas where synergies with respective entities and policy groups is helping to translate the latest science in order to support policy level decision making and policy development.

To date a significant number of interactions with entities have taken place and subsequently, synergies have been developed that enable the dissemination of scientific results to a wider audience. Communication and further interaction is ongoing and will continue with entities where synergies have been developed. The EJP SOIL will also develop new synergies and relationships with new entities as they are identified and as the potential benefits are realised and the need arises.

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