Towards climate-smart sustainable management of agricultural soils

Deliverable 8.4
Mapping policy stakeholders up to EU level across EJP SOIL Partner Countries

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List of acronyms and abbreviations

WP   Work Package
EU   European Union
CCM   Climate change mitigation
CCA   Climate change adaptation
SP   Sustainable production
SE   Sustainable environment
FS   Food Security
ES   Ecosystem services
ALD   Avoiding land degradation

1. Executive summary

The overall aim of the European Joint Programme for soil (EJP SOIL) Science to policy interaction work package 8 (WP8), is to support a strengthened science-policy interface in the area of agricultural soil management and climate change mitigation and adaptation. This work aims to provide support for policies and initiatives concerned with soil C accounting, the delivery of soil ecosystem services and enhanced soil quality and optimised soil management and fertilisation practices. This report (D8.4 Report mapping policy stakeholders at EU level and in EJP SOIL partner countries) details the outcomes of EJP SOIL Sub-Task 8.1.1 - Analysis of key policy stakeholders. The methodology (Appendix A, B) outlined in Section 4 was developed to help identify key stakeholders and stakeholder organisations involved across different scales i.e. regional level, national level and national to EU level, who have particular relevance for the EJP SOIL policy domains. These domains focus on **1. climate change mitigation** (policies to mitigate or limit climate change related to agricultural land), **2. climate change adaptation** (policies that respond to changing weather patterns affecting agricultural soils), **3. sustainable production** (food and agricultural policies), and **4. sustainable environment** which was divided into two sub-domains, *ecosystem services* (land base services including water purification and regulation, climate regulation, biodiversity and nutrient cycling) and *avoiding land degradation* (sustainable agricultural management practices). This sub-division was done to facilitate a more in depth analysis of the two very complex policy branches of sustainable environment within the scope of the EJP SOIL Programme. The methodology consisted of two main activities, an initial identification and shortlisting of stakeholders (Table 3B & 4B, Appendix B) as well as an analysis of the shortlisted policy stakeholders (Table 5B, Appendix B). Those key policy stakeholders that were shortlisted were then asked to complete a survey that facilitated the analysis of the mapped stakeholders. This analysis, conducted under Sub-Task 8.1.1, assessed various stakeholder attributes including their knowledge of policy, influence on decision making processes and capacity to mobilise resources. It allowed their position within the EJP SOIL policy stakeholder network to be described, and will contribute to the purposes of future WP8 activities such as Sub-Task 8.2.1 Needs Analysis of policy stakeholders along with consultative tasks in the future of the EJP SOIL Programme. The results of this policy stakeholder mapping and analysis exercise are the focus of this report. This work completed under Sub-Task 8.1.1 has identified key policy stakeholders and stakeholder organisations across a range of EJP SOIL partner countries (10 EU countries), providing insights on who and what organisations have interest, resources, influence and power in relation to the different soil policy domains of interest to the EJP SOIL. This stakeholder mapping across a range of EJP SOIL partner countries provides a standardised dataset of key stakeholders and stakeholder organisations interacting with agricultural soil related policy from regional, national and national to EU levels to be targeted with follow-up surveys to identify key policy stakeholder needs for scientific information. These policy stakeholders are involved in and influence various stages of the policy cycle and by analysing their roles, the scale at which they operate and their knowledge within each of the policy domains of the EJP SOIL an understanding of this group is being developed.

The results of this task are very important to planning and designing future WP8 activites, that can efficiently and effectively engage with these mapped stakeholders. The key policy stakeholder organisations, and, or individual departments or divisions within organisations, with a stake in agricultural soil related policy mapped across the different member states included government ministries, NGO's and farmers unions. The majority of mapped stakeholders (86%) had a high

knowledge of policy and are functioning at either a national level (48%) or a national to EU level (46%). The majority were also classified as policy designers (58%), followed by indirect policy designers (18%) and then equal percentages of policy evaluators and policy implementers (12%). Expertise across the EJP SOIL domains was also mapped, with a majority of stakeholders (70%) possesing expertise in the domain of avoiding land degradation. Stakeholder expertise was lowest in the domain of sustainable production with only 48% of stakeholders indicating expertise in this area.

2. WP8 Background

Overall objectives and approach taken in WP8 –Science to policy interaction

The overall aim of WP8 is to support a strengthened science-policy interface in the area of agricultural soil management and climate change mitigation and adaptation. The focus will be on providing support for the implementation of soil C accounting, the delivery of soil ecosystem services and enhanced soil quality and optimised soil management and fertilisation practices. The Key objectives are to:

- Identify and address current and future policy needs (e.g. CAP, Climate Policy, Land Degradation Neutrality) for new knowledge and scientific evidence base at a range of scales as appropriate (i.e. regional, national and European);
- Facilitate access to scientific knowledge at appropriate scales for national and European policy makers and support the effective use of scientific results for policy design at these different scales;
- Provide scientific support to policymakers to enable the design of effective policy measures at different scales, especially in relation to soil carbon accounting;
- Summarise key findings of the EJP SOIL for dissemination to policymakers;
- Promote the work and outputs of the EJP SOIL to EU and international policymakers;
- Establish relationships with related projects and initiatives in order to exploit synergies in the science-policy interface.

The approach taken in WP8 is to provide evidence-based recommendations to EU and national/regional policymakers on optimal agricultural soil management through:

a. Establishing open dialogue and information flow between the EJP consortium and relevant EU and national/regional policymakers with governance over agriculture, environment and climate policy;
b. Seeking information from policymakers in order to facilitate access to, and more fully exploit scientific results that are already available for informing, developing and implementing soil related policy;
c. Synthesising research results with policy impact to policymakers to enable improved policy implementation;
d. Facilitating knowledge sharing and mutual learning among policymakers;
e. Establishing relationships with related projects and initiatives in order to exploit synergies in the science-policy interface.

3. Introduction

Stakeholder engagement is essential for informing needs for scientific research and achieving positive and transformative change towards climate smart and sustainable soil management in future. The relationship between the stakeholders and the EJP SOIL is circular by nature as these stakeholders provide key information that will help to inform the work of the EJP SOIL and also to help target the science to policy dialogue and dissemination of the recommendations and scientific evidence produced by the EJP SOIL. Due to the importance and valuable nature of this relationship understanding and analysing the stakeholders and stakeholder organisations involved is key to ensuring that they can be effectively engaged with both when seeking information from them as well as providing them with new information.

The EJP SOIL has developed several initial tasks aimed at mapping key stakeholders, the main one being Task 9.1 Mapping of key stakeholders. Work Package 8 contributes to this task by focusing specifically on key policy stakeholders who will be analysed under Sub -Task 8.1.1 "Analysis of key policy stakeholders".

These policy stakeholders are involved in and influence various stages of the policy cycle and by analysing their roles, the scale at which they operate and their knowledge within each of the policy domains of the EJP SOIL an understanding of this group is being developed. This understanding is key to effectively designing and engaging them in future WP8 activities e.g. Sub-Task 8.2.1 Analysis of policy maker needs. This deliverable 8.4 report presents the methodology used to identify and analyse these key policy stakeholders and the results of this mapping and analysis work.

3.1. Sub-Task 8.1.1 Analysis of key policy stakeholders

To improve science-policy interaction it is necessary to know 'who' the stakeholders are that should be consulted to engage in subsequent work and contribute to EJP SOIL related activities. The focus of sub-task 8.1.1 is to identify key policy stakeholders, within the EJP SOIL member countries, who are engaged in policy cycle activities at national and/or at national to EU scale and possess a robust understanding of at least one of the EJP SOIL policy domains. A stakeholder may of course, have understanding in more than one of the following EJP SOIL policy domain areas:

1. **Climate change mitigation (CCM)**
- Policies to mitigate or limit climate change related to agricultural land,
2. **Climate change adaptation (CCA)**
-Policies that respond to changing weather patterns affecting agricultural soils,
3. **Sustainable Production (SP)**
- Food and agricultural policies, mainly CAP
4. **Sustainable Environment (SE)**
        Ecosystem services (ES)
- Land based services including water purification and regulation, climate regulation, biodiversity and nutrient cycling
        Avoiding land degradation (ALD)
– Polices that identify sustainable agricultural management practices

The policy domains presented above were devised by the EJP SOIL Programme to provide the scope of areas most relevant to the activities of the EJP SOIL. As such, they are core to the identification and analysis of relevant policy stakeholders, as they provide a basis for the key areas of expertise within which identified policy stakeholders need to be knowledgeable.

To ensure that the stakeholder mapping activity did not solely focus on the most obvious stakeholders, a two-step process was proposed[1] that aims to capture not only the most obvious stakeholders, but also those that may have an important role, such as in relation to policy implementation or evaluation.

The two steps involved in this process are:
1. The identification of stakeholders;
2. Shortlisting/ranking the identified stakeholders according to their level of interest and influence.

Those key policy stakeholders that were shortlisted were then asked to complete a survey that facilitated the analysis of the mapped stakeholders. This analysis, conducted under Sub-Task 8.1.1, assessed various stakeholder attributes including their knowledge of policy, influence on decision making processes and capacity to mobilise resources. It allowed their position within the EJP SOIL policy stakeholder network to be described, and will contribute to the purposes of future WP8 activities such as Sub-Task 8.2.1 Needs Analysis of policy stakeholders along with consultative tasks in the future of the EJP SOIL Programme. The results of this policy stakeholder mapping and analysis exercise are the focus of this report.

Understanding the roles, power and interest of these stakeholders will help to provide a clearer plan of action for the dissemination of scientific evidence based recommendations into the policy sphere. Often times these recommendations can be lost in translation from the science interface to the policy interface, or are simply delivered to persons with the technical knowledge to understand them but who are lacking the influence to apply them. By analysing the key policy stakeholders in the EJP SOIL partner countries and understanding their roles in the policy cycle WP8 will be able to navigate this science-policy interface with greater success and allow the EJP SOIL to be recognised as a source of relevant novel scientific findings that are key to supporting future policy.

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[1] Source: https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-53_en_0.pdf

4. Methodology

This task comprised two main activities 1) Identification of key policy stakeholder organisations and, or departments or divisions within organisations at country level based on the mapping exercise provided and 2) Stakeholder analysis of five mapped key policy stakeholders, per country, to collect key information about these stakeholders e.g. the organisation, knowledge of policy, scale of operation etc. Three supporting files were provided for the completion of this activity within Sub-Task 8.1.1. These included 1) A guideline document which provided instructions for the task (Appendix A), 2) Stakeholder mapping tool which was in the form of an Excel file (Appendix B) and 3) Stakeholder mapping summary report, also an Excel file. These were developed and disseminated to each of the EJP SOIL partners. Both the stakeholder mapping tool and summary report files were to be completed based on the instructions in the guideline document.

Necessary for this task is a clear understanding of some key terms such as 'policy stakeholder', as well as an understanding of the ways these stakeholders can be classified. For the purposes of WP8 within EJP SOIL a **policy stakeholder** is defined as any person/entity involved in or affected by the policy cycle and the implementation of policies. The policy stakeholders targeted within this Sub-Task fall into one of the four categories described below and outlined in Fig. 1. These categories were devised based on reviewer suggestions and comments.

➢ **Policy designer** – Person or entity involved in conceptualisation and creation of polices and clarifies the objectives and goals of the policy being created.
➢ **Policy evaluators** – Persons or entities with the technical scientific knowledge required to assess policies and determine if the policy will achieve the desired outcome based on the current science.
➢ **Policy implementers** – Persons or entities typically Government Organisations, that oversee the implementation, monitoring, reporting and verification of policies at regional / national or EU level.
➢ **Indirect policy designers** – Persons or entities that influence the policy cycle, in particular the policy conceptualization and design phase.
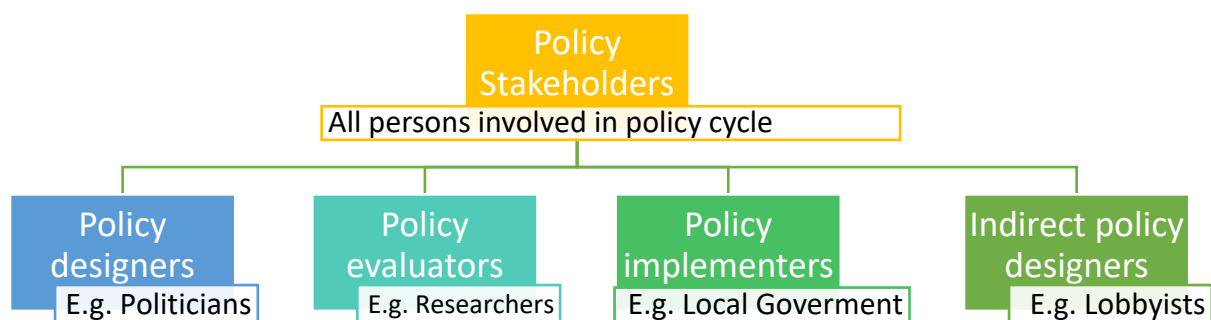
Figure 1 Classification of policy stakeholders based on their role in the policy cycle.

A fifth group of policy stakeholders also exists, which includes persons/entities affected by policy such as farmers, civil society and the general public. This group was not targeted by these specific D8.4 activities which focused on identifying and analysing those persons/entities actively involved in the policy cycle. However, WP8 is aware of the importance of these other stakeholders and will engage with them in future WP8 stakeholder mapping activities.

4.1. Stakeholder Mapping

At country level, EJP SOIL partner contacts identified five relevant stakeholder organisations who engage with each of the EJP SOIL policy domains in their country. Five stakeholders representing these organisations and policy domain areas were asked to complete Section B: Brainstorming Activity of the stakeholder mapping tool (Tables 7B & 8B,Appendix B) to allow for the identification and mapping of stakeholders based on the guiding instructions in "Guidelines for the stakeholder input for subtasks T8.1.1" document (Appendix A). A snowballing technique was implemented in Section B, so that each stakeholder identified five more stakeholders. Upon completion, EJP SOIL partners examined the list of 25 stakeholders generated and identified the top five key policy stakeholder organisations who have good knowledge, understanding and engagement with the EJP SOIL policy domains. Where possible, the policy stakeholder organisations who have good knowledge and understanding of at least one core EJP SOIL policy domain area was to be included. These top five key policy stakeholder were then asked to complete the stakeholder analysis activity on behalf of their organisation.

4.2. Stakeholder Analysis

Each of the top five key policy stakeholders identified within each EJP SOIL partner country in the stakeholder mapping exercise were then asked to individually complete Section C: Stakeholder Analysis of the stakeholder mapping tool (Table 9B, Appendix B) based on the instructions in the guideline document (Appendix A). The EJP SOIL partner contact person then collated the five key policy stakeholder responses in each of their countries into the one stakeholder mapping summary report file for that country. The summary report file was designed to contain the responses of all five key policy stakeholders (representing the key stakeholder organisations across the policy domains) and two additional columns were added to derive a score for interest and power in Section C. The summary report file for each country was then returned to the WP8 team and stored for future analysis using a secure centralised document storage system. In total 10 country level responses to Sub-Task 8.1.1 were collected covering a range of the EJP SOIL partner countries and are presented in this report.

5. Results

In compliance with GDPR best practice, key stakeholders have been anonymised for reporting purposes here and have been assigned unique Stakeholder ID's. The top five stakeholders (as determined by influence) are described in this report and are those that will be targeted to completed the survey in sub-task 8.2.1 (policy stakeholder needs). Additional stakeholders are recorded that may have scope for inclusion in further consultative tasks within WP8.

In line with D8.4 objectives, stakeholders were characterised based upon the following criteria briefly described below. Each of these criteria as well as the explanation of the response options is presented in detail in Appendix A.

1. **Classification** – the group of policy stakeholders to which the respondent belongs, selected from one of the four options presented: policy designer, policy implementer, policy evaluator and indirect policy designer.
2. **Scale** - their scale or level of operation. Three scales were considered namely; bridging stakeholders with involvement at national and up to EU levels thereby bridging the national to EU scales, national stakeholders, involved solely at a national level and regional/local stakeholders involved only at a local scale.
3. **Knowledge** – An estimate of the degree of a stakeholder's knowledge of relevant policy; High, Moderate, Low.
4. **Interest** - stakeholder interest was determined based upon two dimensions and reflected as *impact*accountability* with a maximum score of 9 indicative of the highest level of interest, 6 as medium interest and 3 a low level of interest.
   a. *Impact* – based upon how EJP SOIL activities related to policy domains will impact that stakeholder. Three impact levels defined as: maximum impact on group/individual; moderate and will have measurable impact on the group/individual or minimal impact on stakeholder(s) and;
   b. *Accountability*: 3= Maximum: Stakeholder has high accountability for policy process; 2= Moderate stakeholder has a measureable accountability for the science policy process; 3= Minimal accountability for the science policy process
5. **Power** - stakeholder power was similarly determined upon two dimensions reflected as *resources*influence* with a maximum score of 9 indicative of the highest level of interest, 6 as medium interest and 3 a low level of interest.
   a. *Resources* based upon stakeholder's capacity to mobilise resources. High = stakeholder can make decisions on allocation of policy resources, Medium= Stakeholder can access policy related resources, Low = Stakeholder cannot make decisions regarding the use of resources.
   b. *Influence:* please provide your best estimate of stakeholder influence using this three-category code: High, Medium, Low (Influence refers to the extent to which this stakeholder can persuade/coerce other to make decisions). High: This person/group has power of veto, formally or informally so their influence is central to achieving desired policy outcomes, Medium: Goals could be achieved without their support but not easily, Low: This person/group can do little to influence the policy outcomes.

5.1. Mapped Stakeholders by Country

5.1.1. Belgium

Table 1 Description of key stakeholders selected by Belgium

	Stakeholder ID	BE_1	BE_2	BE_3	BE_4	BE_5
Stakeholder Information	**Organisation**	Departement of Agriculture and Fisheries	Departement of Agriculture and Fisheries	Boerenbond (Farmer's Union)	Government of Flanders	Department of Environment
	Classification	Policy designer	Policy designer	Indirect Policy designer	Policy designer	Policy designer
Policy domains that the stakeholder engages with	**Climate Change Mitigation**	Yes	Yes	Yes	Yes	Yes
	Climate Change Adaptation	Yes	Yes	Yes	Yes	No
	Sustainable Production	Yes	Yes	Yes	Yes	No
	Ecosystem Services	Yes	No	No	Yes	No
	Avoiding Land Degradation	Yes	Yes	Yes	Yes	No
Stakeholder Attributes	**Scale**	Bridging	Bridging	Bridging	Bridging	Bridging
	Knowledge of Policy	High	High	High	High	High
Interest (Impact x Accountability)	**Impact of science on policy**	Maximum	Moderate	Minimal	Maximum	Moderate
	Accountability	Maximum	Maximum	Maximum	Maximum	Maximum
	Score	9	6	3	9	6
Power (Resources x Influence)	**Resources**	High	High	High	High	High
	Influence	High	High	High	Medium	Medium
	Score	9	9	9	6	6

The five stakeholder representatives identified in Belgium represent four organisations. Two of these stakeholders (BE_1 & BE_2) belong to different divisions within the Department of Agriculture and Fisheries (data not available). In Belgium these governmental departments are the equivalent of ministries in other countries. All organisations identified function as bridging stakeholders, operating at a National to EU level and policy knowledge is high across all organisations. The Farmer's Union (BE_3) was the only organisation classified as an indirect policy designer with all others classified as policy designers. Consequently, the Farmer's Union had the lowest interest score among all five organisations based on this organisation's minimal impact on policy as a result of scientific evidence provided by EJP SOIL. The Farmer's Union however, was one of two organisations with a very high power rating. Both divisions within the Department of Agriculture and Fisheries (BE_1 & BE_2) also had high power scores.
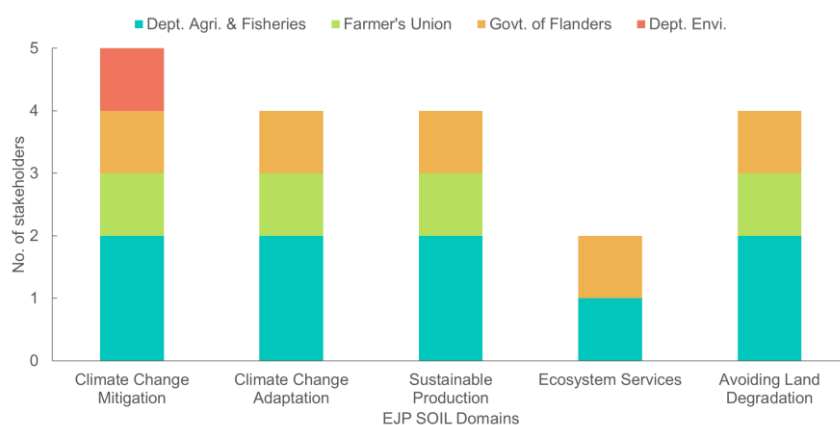

Figure 2 Mapped stakeholder expertise within the EJP SOIL policy domains for Belgium

Policy expertise in the domain of climate change mitigation was present at all organisations. The domains of climate change adaptation, sustainable production and avoiding land degradation were also well covered with at least three organisations possessing expertise within these domains.

5.1.2. France

Table 2 Description of the key stakeholders selected by France

	Stakeholder ID	FR_1	FR_2	FR_3	FR_4	FR_5
Stakeholder Information	**Organisation**	Ministry of Environment	Ministry of Agriculture	FNSEA	INRAE	FNE (France Nature Environment)
	Role/Department	Planning, Housing and Nature	Environmental Performance and Regional Development	Department of Environment	International Policy	National Secretary
	Classification	Policy Designer	Policy Designer	Indirect Policy Designer	Policy Evaluator	Indirect Policy Designer
Policy domains that the stakeholder engages with	**Climate Change Mitigation**	Yes	No	Yes	Yes	Yes
	Climate Change Adaptation	No	Yes	Yes	Yes	No
	Sustainable Production	No	Yes	Yes	Yes	No
	Ecosystem Services	Yes	Yes	No	Yes	Yes
	Avoiding Land Degradation	Yes	Yes	Yes	Yes	Yes
Stakeholder Attributes	**Scale**	Bridging	Bridging	Regional/Local	Bridging	National
	Knowledge of Policy	High	High	High	Low	High
Interest (Impact x Accountability)	**Impact of science on policy**	Moderate	Moderate	Minimal	Maximum	Moderate
	Accountability	Maximum	Maximum	Moderate	Maximum	Maximum
	Interest Score	6	6	2	9	6
Power (Resources x Influence)	**Resources**	Medium	Medium	Medium	High	Medium
	Influence	High	High	High	Medium	Medium
	Score	6	6	6	6	4

Among the five key organisations identified in France, the ministries of environment (FR_1) and agriculture (FR_2) were classified as policy designers, the National Federation of Farmer's Unions (FNSEA, FR_3) and the NGO France Nature Environment (FNE, FR_5) were classified as indirect policy designers and the institution INRAE (FR_4) was classified as a policy evaluator. FNSEA was identified as operating at a local/regional scale, FNE at a national scale and the other three organisations at a bridging scale between national and EU level. Policy knowledge was rated as high among all organisations except for INRAE, however, INRAE was found to have the highest interest score based on maximum ratings of accountability and impact on policy.
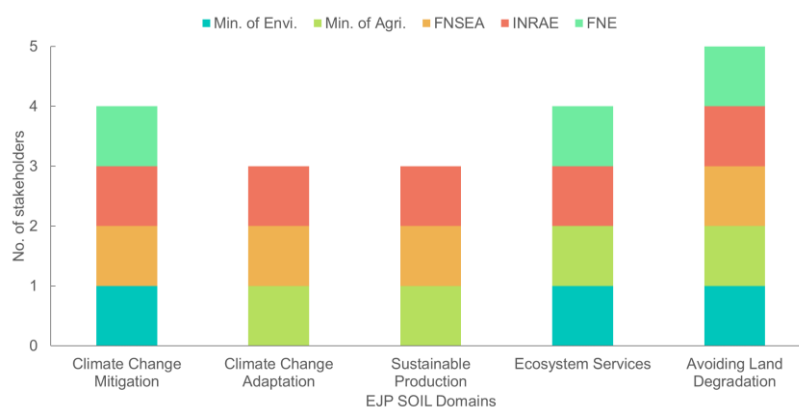
Figure 3 Mapped stakeholder expertise within the EJP SOIL policy domains for France

Expertise in the domain of avoiding land degradation is present at all the organisations identified making this domain the best represented. Expertise in the domains of climate change mitigation and ecosystem services is present at four out of the five organisations while only three organisations possess expertise in the domains of sustainable production and climate change adaptation.

5.1.3. Germany

Table 3 Description of the key stakeholders selected by Germany

		DE_1	DE_2	DE_3	DE_4	DE_5
Stakeholder Information	Stakeholder ID	DE_1	DE_2	DE_3	DE_4	DE_5
	Organisation	Federal Ministry of Food and Agriculture - BMEL	Federal Ministry of Food and Agriculture - BMEL	Federal Ministry of Food and Agriculture - BMEL	German Environment Agency (UBA)	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
	Department/Area	Division 523	Division Innovation funding	Division Agronomy, Grassland		
	Classification	Policy Designer	Policy Designer	Policy Designer	Policy Evaluator	Policy Designer
Policy domains that the stakeholder engages with	Climate Change Mitigation	Yes	No	No	Yes	Yes
	Climate Change Adaptation	Yes	No	No	Yes	No
	Sustainable Production	No	Yes	No	No	No
	Ecosystem Services	No	No	Yes	Yes	Yes
	Avoiding Land Degradation	No	No	Yes	Yes	Yes
Stakeholder Attributes	Scale	Bridging	National	National	Bridging	National
	Knowledge of Policy	High	High	High	High	High
Interest (Impact x Accountability)	Impact of science on policy	Minimal	Minimal	Minimal	Minimal	Minimal
	Accountability	Moderate	Moderate	Moderate	Moderate	Moderate
	Interest Score	2	2	2	2	2
Power (Resources x Influence)	Resources	Medium	Medium	Medium	Low	Medium
	Influence	Medium	Medium	Medium	Low	Medium
	Score	4	4	4	1	4

Stakeholders DE_1, DE_2 and DE_3 represent different divisions within the Federal Ministry of Food and Agriculture and these divisions were all classified as policy designers with two out of the three divisions functioning at only a national level (DE_2 & DE_3). DE_5 was classified as a policy designer operating at a national level. The UBA was classified as a policy evaluator that operates at both national and EU level. Knowledge of policy was rated as high across all of these organisations, with very low interest scores across all organisations. Power scores were also low as all three divisions within BMEL, as well as the Ministry for the Environment, Nature Conservation and Nuclear Safety had a score of 4, one organisation UBA, had the lowest possible power score of 1.
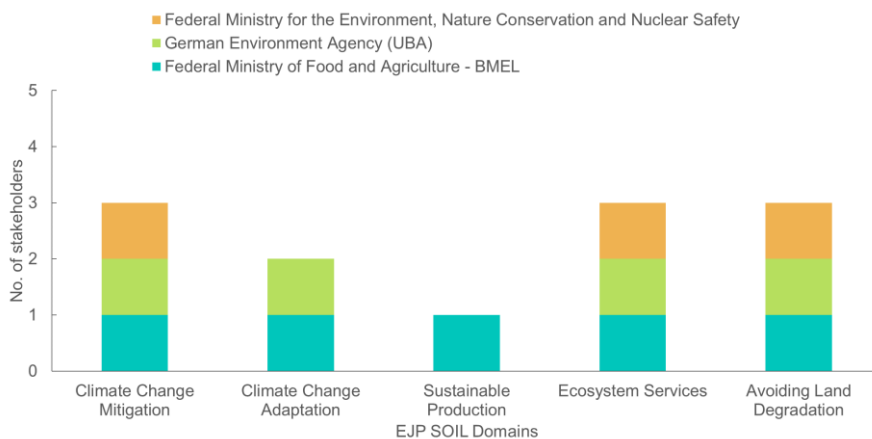

Figure 4 Mapped stakeholder expertise within the EJP SOIL policy domains for Germany

For the domains of climate change mitigation, ecosystem services and avoiding land degradation expertise can be found at all three organisations represented. Expertise in the domain of sustainable production is only present at BMEL.

5.1.4. Ireland

Table 4 Description of the key stakeholders selected by Ireland

	Stakeholder ID	IE_1	IE_2	IE_3	IE_4	IE_5
Stakeholder Information	Organisation	Department of Agriculture, Food and the Marine	Department of Environment, Climate and Communications	Department of Housing, Local Government and Heritage	Teagasc	Environmental Protection Agency
	Classification	Policy designer	Policy designer	Policy designer	Policy evaluator	Policy implementer
Policy domains that the stakeholder engages with	Climate Change Mitigation	Yes	Yes	No	Yes	Yes
	Climate Change Adaptation	No	Yes	No	Yes	Yes
	Sustainable Production	Yes	No	No	Yes	No
	Ecosystem Services	Yes	Yes	Yes	Yes	No
	Avoiding Land Degradation	Yes	Yes	Yes	Yes	Yes
Stakeholder Attributes	Scale	National	National	National	National	National
	Knowledge of Policy	High	Moderate	Moderate	High	High
Interest (Impact x Accountability)	Impact of science on policy	Maximum	Maximum	Maximum	Minimal	Maximum
	Accountability	Maximum	Maximum	Maximum	Maximum	Moderate
	Interest Score	9	9	9	3	6
Power (Resources x Influence)	Resources	High	Medium	Medium	Low	Low
	Influence	High	High	High	Medium	Medium
	Score	9	6	6	2	2

It should be noted that in Ireland there are government departments which are equivalent to government ministries elsewhere. Three of the stakeholder organisations identified were classified as policy designers, while the remaining two were classified as either a policy evaluator or policy implementer. All stakeholder organisations were found to operate at a national scale and possessed moderate to high knowledge of policy. Interest scores were very high among the government departments (IE_1, IE_2 & IE_3) with organisations such as Teagasc and the Environmental Protection Agency having lower scores of 3 and 6 respectively. This pattern continued with the power scores with the three government departments also having higher power scores than the other two organisations.
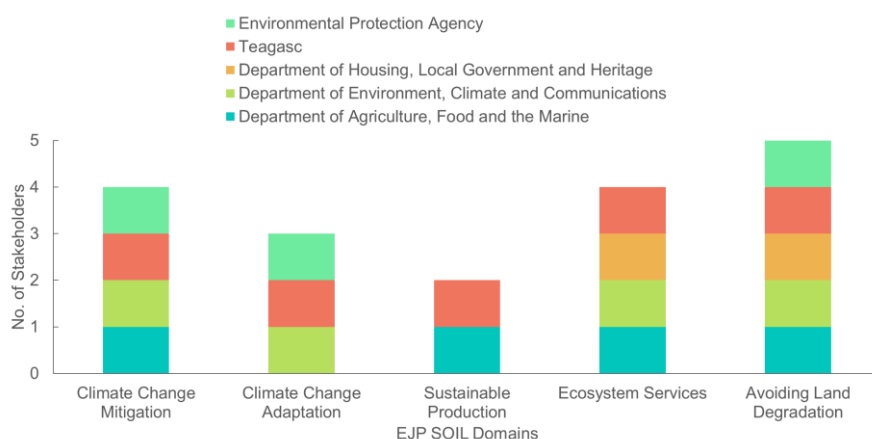
Figure 5 Mapped stakeholder expertise within the EJP SOIL policy domains for Ireland

Expertise within the domain of avoiding land degradation was present at all five stakeholder organisations identified, making this the best represented domain. Four stakeholder organisations had expertise in the domains of climate change mitigation and ecosystem services. Only two organisations were found to have expertise within the domain of sustainable production.

5.1.5. Latvia

Table 5 Description of the key stakeholders selected by Latvia

	Stakeholder ID	LV_1	LV_2	LV_3	LV_4	LV_5
Stakeholder Information	**Organisation**	Ministry of Environment Protection and Regional Development	World wildlife foundation Latvia	Ministry of Agriculture of Latvia	Ministry of Environment Protection and Regional Development	Baltic Environmental Forum
	Role/Department	Land Policy Division	Baltic Sea and Freshwater programme	Head of Division	Environment, Geology and Meterology Centre	Researcher
	Classification	Policy designer	Indirect policy designer	Policy designer	Policy designer	Indirect policy designer
Policy domains that the stakeholder engages with	**Climate Change Mitigation**	Yes	Yes	No	Yes	Yes
	Climate Change Adaptation	Yes	Yes	No	Yes	Yes
	Sustainable Production	No	Yes	Yes	No	No
	Ecosystem Services	Yes	Yes	No	No	Yes
	Avoiding Land Degradation	Yes	Yes	No	No	Yes
Stakeholder Attributes	**Scale**	National	National	Bridging	Bridging	Bridging
	Knowledge of Policy	Moderate	High	High	High	Moderate
Interest (Impact x Accountability)	**Impact of science on policy**	Moderate	Minimal	Moderate	Moderate	Minimal
	Accountability	Moderate	Minimal	Moderate	Moderate	Moderate
	Interest Score	4	1	4	4	2
Power (Resources x Influence)	**Resources**	High	Low	Medium	Medium	Low
	Influence	High	Low	Low	Medium	Medium
	Score	9	1	2	4	2

The five stakeholders identified represent four organisations; two divisions within the Ministry of Environment Protection and Regional Development (LV_1 & LV_4), the Ministry of Agriculture (LV_3) and two NGO's (LV_2 & LV_5). Both divisions at the Ministry of the Environment Protection and Regional Development (LV_1 & LV_4) as well as the Ministry of Agriculture were classified as policy designers. The two NGO's were classified as indirect policy designers. The Land Policy division (LV_1) at the Ministry of the Environment as well as the WWF Latvia operate at a national scale. The Environment, Geology and Meteorology Centre under the Ministry of Environment (LV_4), the Ministry of Agriculture and the Baltic Environment Forum were bridging, operating at a national to EU level. Knowledge of policy ranged from moderate to high and scores for interest and power were generally on the lower end of the scale. One exception is the very high power score for the land policy division at the Ministry of the environment protection and regional development (LV_1).
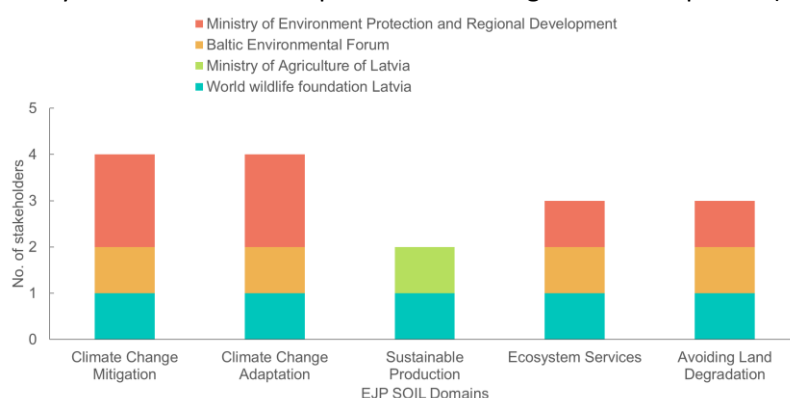

Figure 6 Mapped stakeholder expertise within the EJP SOIL policy domains for Latvia

Expertise in the domains of climate change mitigation and adaptation, ecosystem services and avoiding land degradation was present at three organisations. Only two organisations had expertise in the domain of sustainable production.

5.1.6. Netherlands

Table 6 Description of the key stakeholders selected by the Netherlands

		NL_1	NL_2	NL_3	NL_4	NL_5
Stakeholder Information	Stakeholder ID	NL_1	NL_2	NL_3	NL_4	NL_5
	Organisation	Ministry Agriculture, Nature and Food Policy	Ministry Agriculture, Nature and Food Policy	Ministry of Economic affairs and Climate Policy	Ministry Infrastructure and Water	Ministry Agriculture, Nature and Food Policy
	Role/Department	Soil	Climate Adaptation Agro	Project Manager	Soil and Subsurface	Program Manager
	Classification	Policy Designer	Policy Designer	Policy Designer	Policy Designer	Policy Designer
Policy domains that the stakeholder engages with	**Climate Change Mitigation**	Yes	No	No	No	Yes
	Climate Change Adaptation	No	Yes	No	Yes	Yes
	Sustainable Production	No	No	Yes	No	No
	Ecosystem Services	No	No	No	No	No
	Avoiding Land Degradation	Yes	No	No	No	Yes
Stakeholder Attributes	Scale	National	National	Bridging	National	Local/Regional
	Knowledge of Policy	High	High	High	High	High
Interest (Impact x Accountability)	**Impact of science on policy**	Maximum	Moderate	Moderate	Moderate	Maximum
	Accountability	Moderate	Moderate	Moderate	Moderate	Moderate
	Interest Score	6	4	4	4	6
Power (Resources x Influence)	**Resources**	Medium	Medium	Medium	Medium	Medium
	Influence	High	High	High	Medium	Medium
	Score	6	6	6	4	4

The five stakeholders identified represent three different government ministries. All organisations are classified as policy designers with a high knowledge of policy. Three different departments are represented for the the Ministry of Agriculture and these departments function both at a national level (the department of Soil (NL_1) & the Department of Climate Adaptation Agronomy (NL_2)) and at a local/regional level in terms of policy implementation by programme management (NL_5). The Ministry of Economic affairs (NL_3) functions at a bridging scale and the Ministry of Infrastructure and Water functions at a national scale. Interest and power scores ranged within the middle of the scale from 4-6.

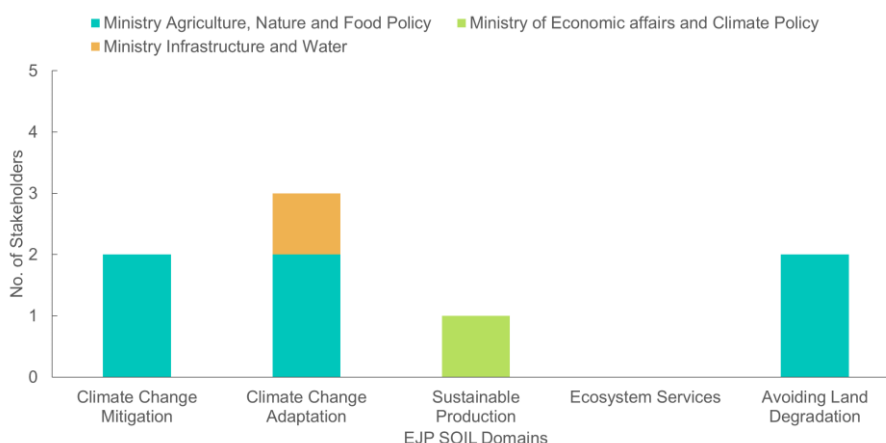
Figure 7 Mapped stakeholder expertise within the EJP SOIL policy domains for Netherlands

Expertise at these organisations was focused with only one or two organisations possessing expertise within any of the domains of climate change mitigation, climate change adaptation, sustainable production and avoiding land degradation. No organisation had expertise in the domain of ecosystem services.

5.1.7. Spain

Table 7 Description of the key stakeholders selected by Spain

		SP_1	SP_2	SP_3	SP_4	SP_5
Stakeholder Information	Stakeholder ID					
	Organisation	Ministry for the Ecological Transition and the Demographic Challenge (MITECO)	Ministerio de Agricultura, Pesca y Alimentación (MAPA)	Ministerio de Agricultura, Pesca y Alimentación (MAPA)	Ministerio de Ciencia e Innovación (MICINN)	Ministry for the Ecological Transition and the Demographic Challenge (MITECO)
	Department	Spanish Office for Climate Change	Agricultural Productions and Markets	Rural Development, Innovation and Agrifood Training	Ministry of Science and Innovation	Biodiversity, Forests and Desertification
	Classification	Policy Designer	Policy Designer	Policy Designer	Policy Designer	Policy Designer
Policy domains that the stakeholder engages with	**Climate Change Mitigation**	Yes	No	No	No	No
	Climate Change Adaptation	No	Yes	No	No	No
	Sustainable Production	No	No	Yes	No	No
	Ecosystem Services	No	No	No	Yes	No
	Avoiding Land Degradation	No	Yes	No	No	Yes
Stakeholder Attributes	Scale	Bridging	Bridging	Bridging	Bridging	Bridging
	Knowledge of Policy	High	High	High	Moderate	High
Interest (Impact x Accountability)	Impact of science on policy	Maximum	Maximum	Maximum	Moderate	Maximum
	Accountability	Moderate	Moderate	Moderate	Maximum	Moderate
	Interest Score	6	6	6	6	6
Power (Resources x Influence)	Resources	High	High	High	Low	High
	Influence	High	High	High	Medium	High
	Score	9	9	9	2	9

The key stakeholders identified all represent government ministries. Three distinct organisations were identified: MITECO (SP_1 & SP_5), MAPA (SP_2 & SP_3) and MICINN (SP_4). All departments were classified as policy designers which function at a bridging scale i.e. nationally and at an EU level. Knowledge of policy was generally high with only the Ministry of science and innovation (SP_4) having a moderate knowledge of policy. All interest scores were in the middle of the possible range. Power scores were very high at two organisations (MITECO & MAPA) with only the Ministry of science and innovation having a very low power score of 2.
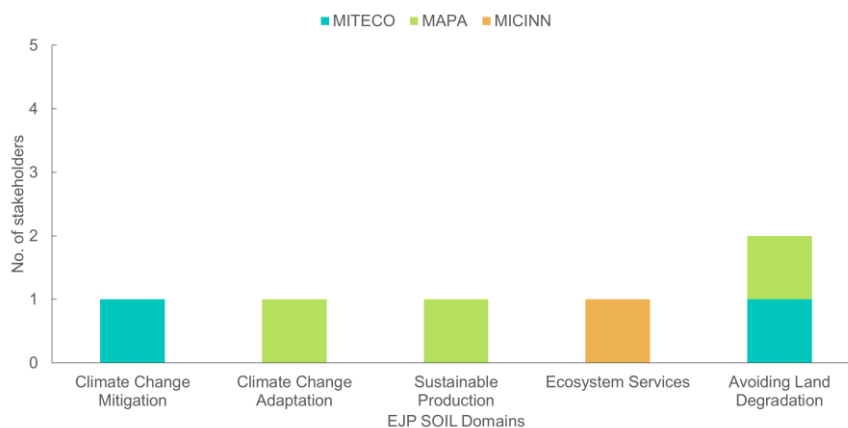

Figure 8 Mapped stakeholder expertise within the EJP SOIL policy domains for Spain

Knowledge was again very focused with organisations such as MITECO and MAPA having expertise in two and three domains respectively. MICINN only possessed expertise in one domain, ecosystem services.

5.1.8. Sweden

Table 8 Description of the key stakeholders selected by Sweden

	Stakeholder ID	SE_1	SE_2	SE_3	SE_4	SE_5
Stakeholder Information	Organisation	Center for Climate Adaptation, SMHI	Federation of Swedish Farmers, Lantbrukarnas Riksförbund	Geological Survey of Sweden, SGU	Swedish Society for Nature Conservation, Naturskyddsföreningen	Swedish Board of Agriculture, Jordbruksverket
	Role	Director of National Knowledge	Senior Policy Advisor	Senior Geologist	Head of Department	Director of Water Section
	Classification	Policy implementer	Policy evaluator	Policy evaluator	Policy implementer	Policy designer
Policy domains that the stakeholder engages with	Climate Change Mitigation	Yes	No	No	No	Yes
	Climate Change Adaptation	Yes	No	No	No	Yes
	Sustainable Production	No	Yes	No	No	No
	Ecosystem Services	Yes	No	No	Yes	Yes
	Avoiding Land Degradation	No	Yes	Yes	No	No
Stakeholder Attributes	Scale	National	Bridging	National	National	National
	Knowledge of Policy	High	High	High	High	High
Interest (Impact x Accountability)	Impact of science on policy	Moderate	Moderate	Moderate	Moderate	Moderate
	Accountability	Moderate	Moderate	Moderate	Moderate	Moderate
	Interest Score	4	4	4	4	4
Power (Resources x Influence)	Resources	Medium	Medium	Low	Low	Medium
	Influence	Medium	Medium	Medium	Medium	Medium
	Score	4	4	2	2	4

The five stakeholder organisations identified in Sweden all have a high knowledge of policy and function at a national scale. Only SE_2 functions at both a national and EU scale. Classification of these five organisations was very diverse with two being classified as policy implementers (SE_1 & SE_4), two as policy evaluators (SE_2 & SE_3) and one as a policy designer (SE_5). Interest scores were moderate across all organisations. Power scores were moderate to low across all organisations as well.

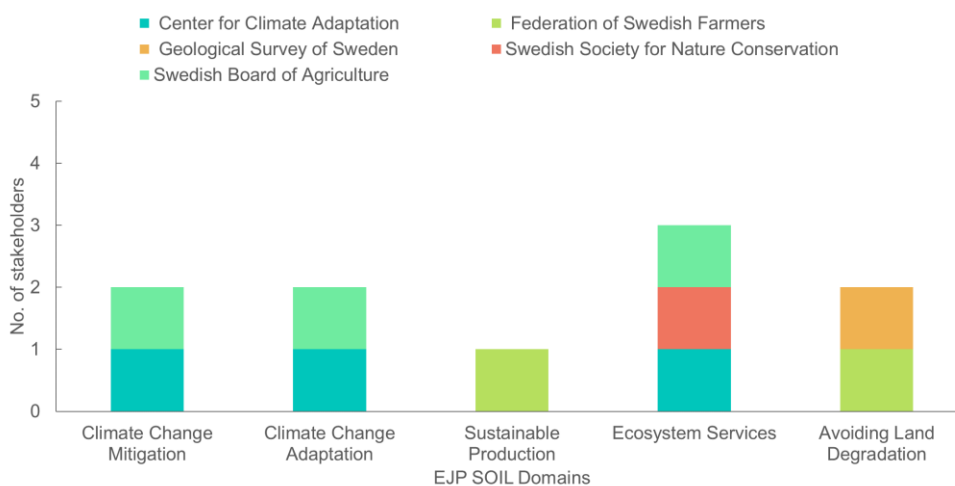*Figure 9 Mapped stakeholder expertise within the EJP SOIL policy domains for Sweden*

Expertise within the domains of climate change mitigation, climate change adaptation and avoiding land degradation was present at two organisations. The domain of ecosystem services was best represented with expertise in this area at three organisations while only one organisation possessed expertise in the domain of sustainable production.

5.1.9. Switzerland

Table 9 Description of the key stakeholders selected by Switzerland

	Stakeholder ID	CH_1	CH_2	CH_3	CH_4	CH_5
Stakeholder Information	**Organisation**	SBV-UPS (Swiss Farmers Association)	KOLAS (Conference of the cantonal agriculture offices and Lichtenstein)	PBUK/KVU (Conferences of the heads of the cantonal environmental departments and the heads of the cantonal environmental protection offices)	SBV-UPS (Swiss Farmers Association)	IP Suisse (Swiss Association of Integrated Production Farmers)
	Role	President, Policy & Economics	General secretary	General secretary	Vice President, Agrarian Economics,Livestock	Managing Director
	Classification	Indirect policy designer	Policy Implementer	Policy Implementer	Indirect policy designer	Indirect policy designer
Policy domains that the stakeholder engages with	**Climate Change Mitigation**	No	No	No	Yes	Yes
	Climate Change Adaptation	Yes	Yes	No	Yes	Yes
	Sustainable Production	Yes	Yes	No	Yes	Yes
	Ecosystem Services	No	No	Yes	Yes	Yes
	Avoiding Land Degradation	Yes	No	Yes	Yes	Yes
Stakeholder	**Scale**	National	National	National	National	National
	Knowledge of Policy	High	High	High	High	High
Interest (Impact x Accountability)	**Impact of science on policy**	Minimal	Minimal	Minimal	Moderate	Maximum
	Accountability	Moderate	Moderate	Moderate	Minimal	Moderate
	Interest Score	2	2	2	2	6
Power (Resources x Influence)	**Resources**	Medium	Medium	Medium	High	High
	Influence	High	High	High	High	High
	Score	6	6	6	9	9

All the key stakeholder organisations identified in Switzerland had a high knowledge of policy and are operational at national level. Two of the four organisations were classified as indirect policy designers (Swiss Farmer's Association and IP Suisse) while the remaining two (CH_2 & CH_3) were classified as policy implementers. Interest scores were generally low across all organisations. Power scores were moderate two organisations (CH_2 & CH_3). IP Suisse had a high power score even though it was classified as an indirect policy designer. The power score for SBV-UPS ranged from moderate (CH_1) to high (CH_4).
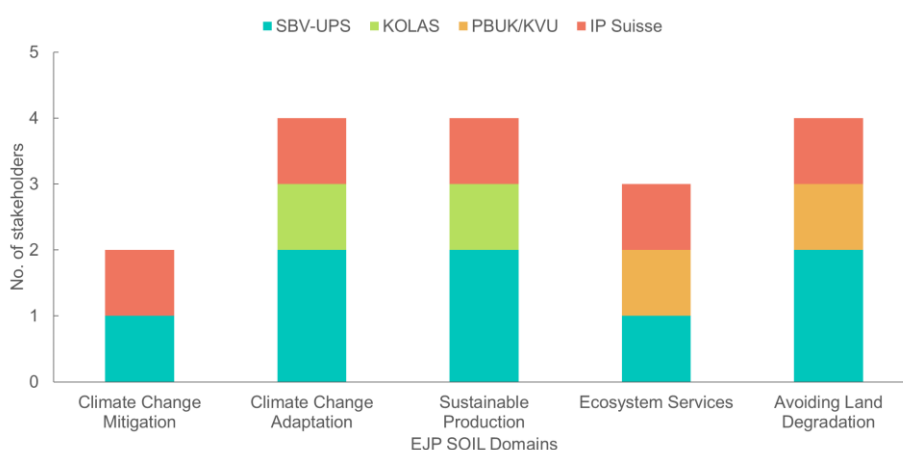

Figure 10 Mapped stakeholder expertise within the EJP SOIL policy domains for Switzerland

Expertise in the domains of climate change adaptation, sustainable production and avoiding land degradation was present at three of the four organisations. Expertise in climate change mitigation was only present at two of the organisations making it the least well represented domain.

5.1.10. United Kingdom

Table 10 Description of the key stakeholders selected by the United Kingdom

Stakeholder Information	Stakeholder ID	UK_1	UK_2	UK_3	UK_4	UK_5
	Organisation	Department for Environment, Food and Rural Affairs	Intensive Livestock & Crops, CAFRE	Welsh Government	Scottish Soil Engagement Group	Soil Association
	Classification	Policy designer	Policy implementer	Policy designer	Policy evaluator	Indirect policy designer
Policy domains that the stakeholder engages with	Climate Change Mitigation	Yes	No	Yes	Yes	Yes
	Climate Change Adaptation	Yes	No	Yes	Yes	Yes
	Sustainable Production	Yes	Yes	Yes	Yes	Yes
	Ecosystem Services	Yes	Yes	Yes	Yes	Yes
	Avoiding Land Degradation	Yes	Yes	Yes	Yes	Yes
Stakeholder	Scale	Bridging	Local/Regional	Bridging	Bridging	National
	Knowledge of Policy	High	High	High	High	Moderate
Interest (Impact x Accountability)	Impact of science on policy	Moderate	Moderate	Moderate	Moderate	Moderate
	Accountability	Moderate	Moderate	Moderate	Moderate	Minimal
	Interest Score	4	4	4	4	2
Power (Resources x Influence)	Resources	High	Medium	High	High	Medium
	Influence	High	Medium	Medium	Medium	Medium
	Score	9	4	6	6	4

It should be noted that similarly to Belgium and Ireland the UK's government has departments which are similar to ministries. Two of the key organisations identified were classified as policy designers (UK_1 & UK_3), one as a policy implementer (UK_2), one as a policy evaluator (UK_4) and one as an indirect policy designer (UK_5). DEFRA, the Welsh Government and the Scottish Soil Engagement group all operate in a bridging capacity at national and EU level. CAFRE operates at a local/regional scale and the Soil Association operates at a national scale. Knowledge of policy among these organisations is high, with only Soil Association having a moderate knowledge of policy. Interest scores were generally low ranging from 2-4. Power score were more varied with Department for Environment, Food and Rural Affairs having a very high power score and all other organisations having a moderate score within the range of 4-6.
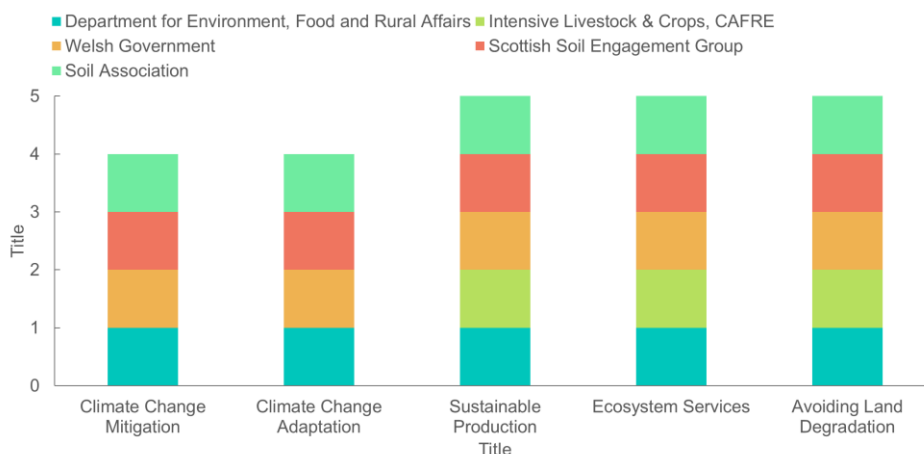

Figure 11 Mapped stakeholder expertise within the EJP SOIL policy domains for the United Kingdom

Expertise in all organisations was very broad, with all five organisations having expertise within the domains of sustainable production, ecosystem services and avoiding land degradation. Four out of five organisations had expertise in the domains of climate change mitigation and adaptation.

5.2. Summary Insights

Many stakeholders of course had expertise in more than one domain, each domain was analysed independently of the others based on the number of stakeholders with expertise in *that* domain. A total of 50 key stakeholders were analysed, but the number of stakeholders with expertise in each domain varied.

5.2.1.   Collective EJP SOIL policy domain expertise

Table 11 Number of mapped stakeholders with expertise in each EJP SOIL policy domain within each respondent EJP SOIL partner country.

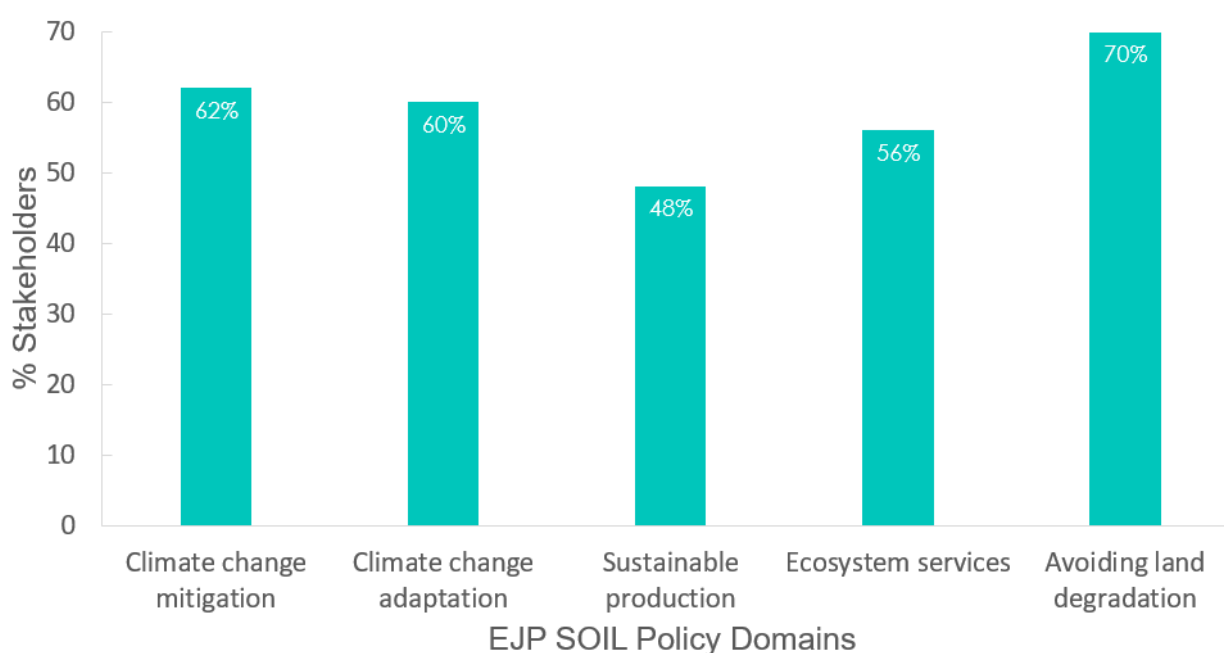| Country/Domain	CCM	CCA	FS	ES	ALD
BE	5	4	4	2	4
FR	4	3	3	4	5
DE	3	2	1	3	3
IE	4	3	2	4	5
LV	4	4	2	3	3
NL	2	3	1	0	2
SP	1	1	1	1	2
SE	2	2	1	3	2
CH	2	4	4	3	4
UK	4	4	5	5	5
Total	**31**	**30**	**24**	**28**	**35**

Figure 12 Percentages of total mapped stakeholders with expertise in each of the EJP SOIL domains across all respondent EJP SOIL partner countries.

In general, the mapped key stakeholders possess expertise across all the core EJP SOIL policy domains. Overall, sustainable production was indicated by the least amount of stakeholders as their area of expertise (48%). In contrast, avoiding land degradation emerged as the domain in which the greatest number of stakeholders had expertise (70%).
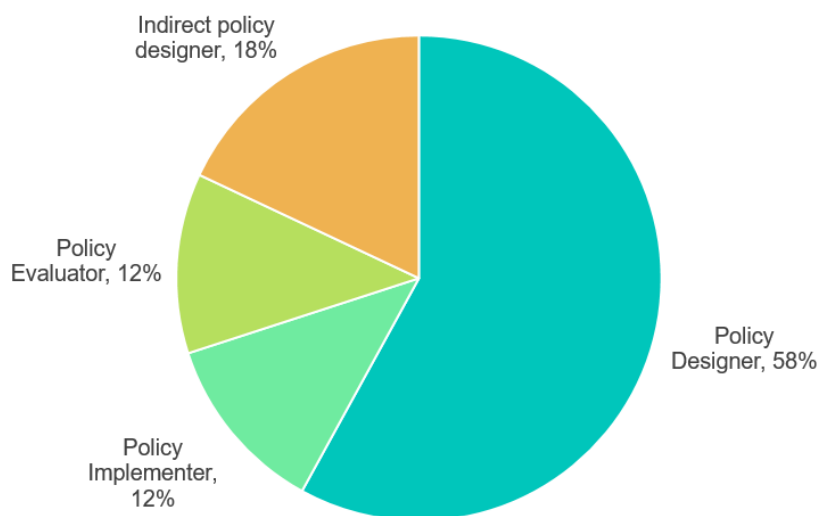
5.2.2. Classification

Figure 13 Overall distribution of stakeholders (n=50) with expertise across the EJP SOIL domains based on their policy role classification across all respondent European countries.

Over half of all the stakeholders mapped were classified as policy designers, the second largest classification was of indirect policy designers e.g. NGO's and Farmer's associations. Policy evaluators and implementers were present in equal proportions.
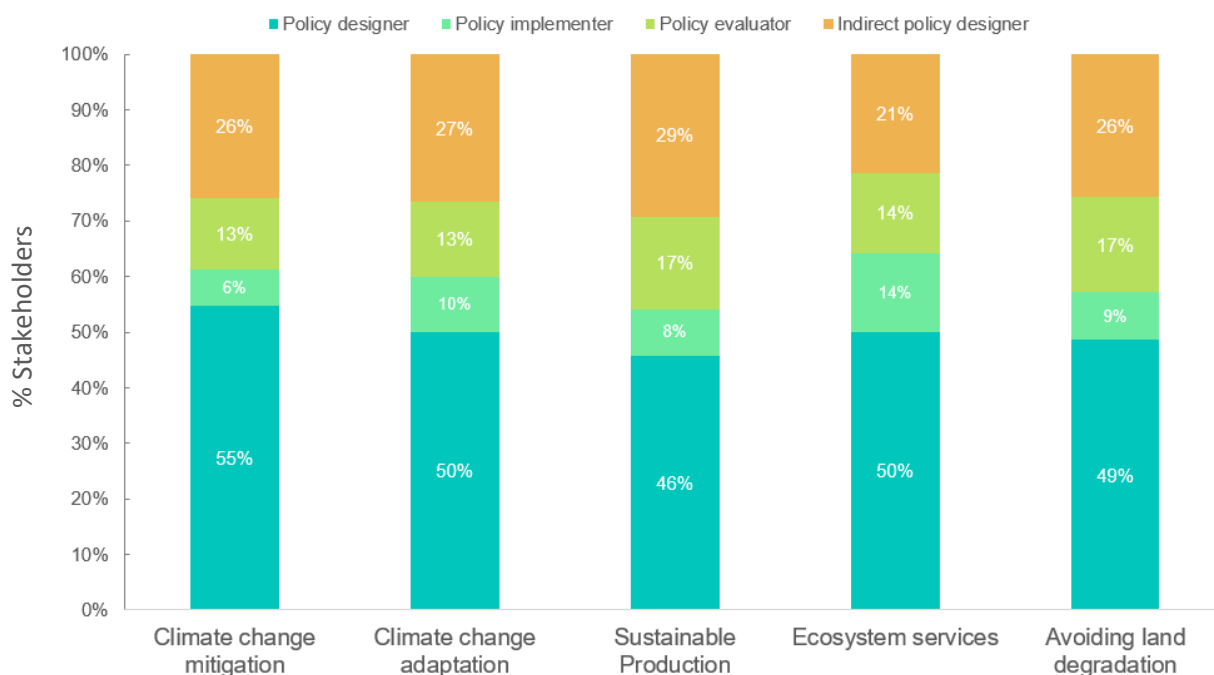

Figure 14 Proportional representation of mapped stakeholders at policy role classification level within each policy domain across all EJP SOIL partner countries.

The distribution of the classifications of stakeholders did not vary greatly by policy domain, with roughly half of the mapped stakeholders in each domain being classified as policy designers. Indirect policy designers accounted for between 21% -29% of mapped stakeholders within each domain. Policy implementers were the smallest group across all domains.
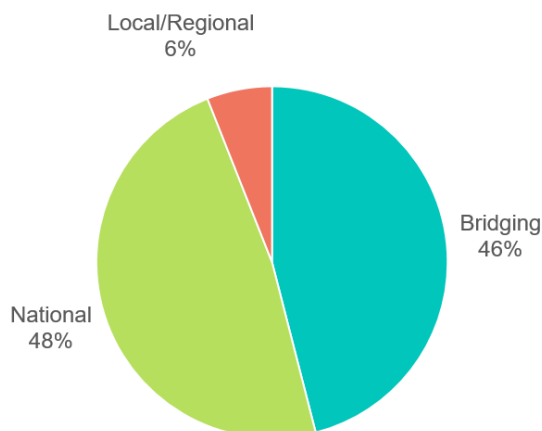
5.2.3. Operating Scale

Figure 15 Overall distribution of stakeholders (n = 50) with expertise across the EJP SOIL domains based on the scale at which they operate across all respondent EJP SOIL partner countries.

The majority of stakeholders were described as operating at a national scale (Fig. 12). The second largest portion (46%) were described as operating at national to EU scale. This boundary spanning scale places these stakeholders in a potentially important role with respect to scaling between levels, for example, the translation of policies from EU to national scale. A small proportion were regional/local scale stakeholders (6%).

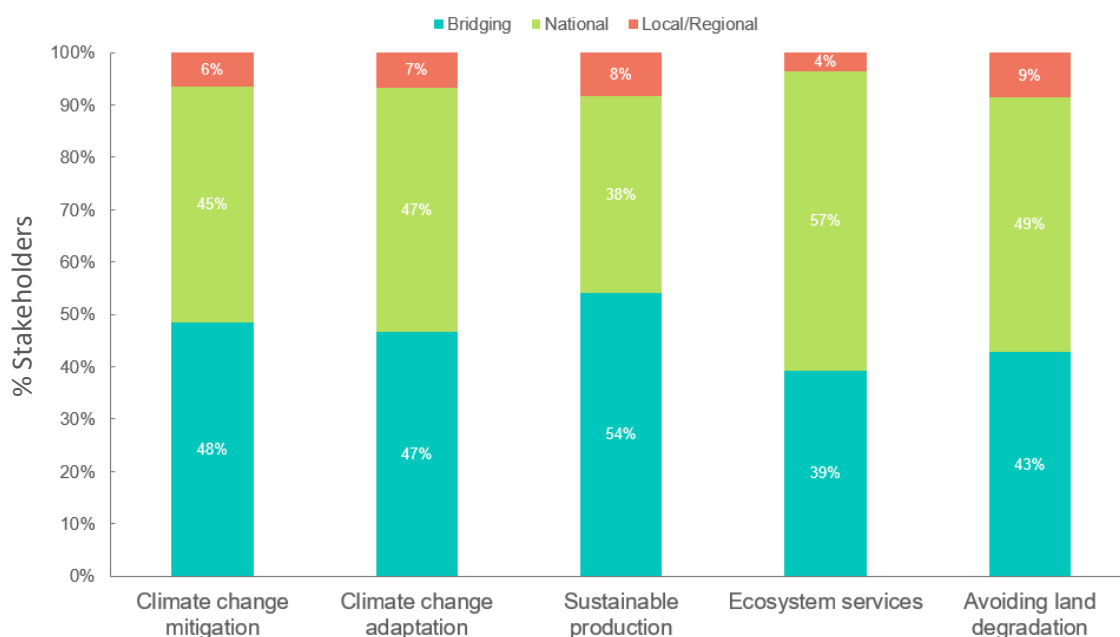*Figure 16 Proportional representation of mapped stakeholders at the scale at which they function within each policy domain across all the respondent EJP SOIL partner countries .*

The domain of ecosystem services has the lowest number of bridging stakeholders but the highest amount of national level stakeholders. The domain of sustainable production has the greatest proportion of bridging stakeholders.
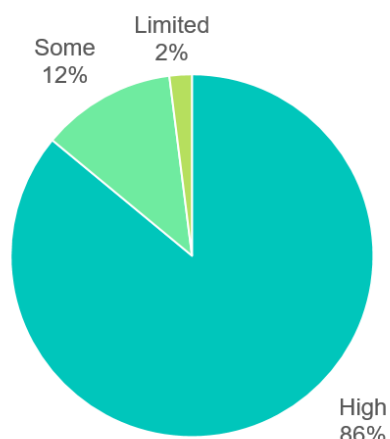
5.2.4. Knowledge of policy

Figure 17 Overall distribution of stakeholders (n = 50) with expertise across the EJP SOIL domains based on their knowledge of policy across all respondent EJP SOIL partner countries.

Stakeholders were ranked upon their knowledge about soil related policy. In general, the majority of the key stakeholders (86%) have a high level of policy knowledge. Only 2% of mapped stakeholders were said to have limited knowledge of policy.
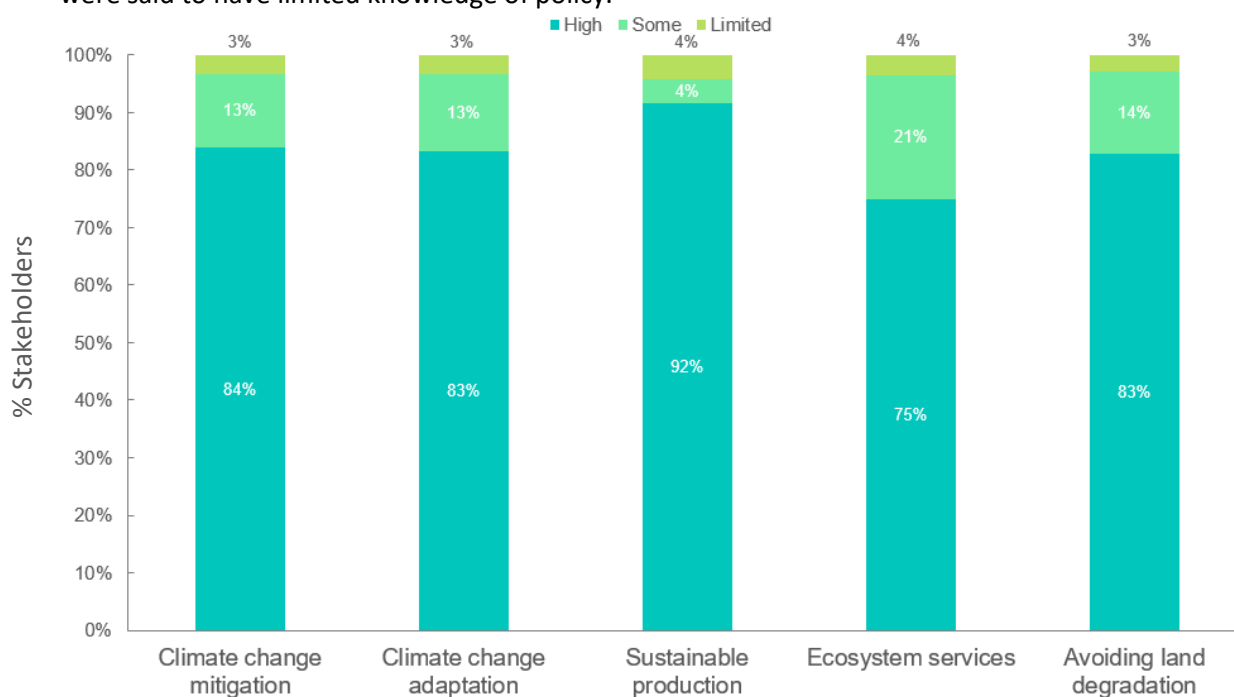

Figure 18 Proportional representation of mapped stakeholders based on degree of policy knowledge within each policy domain across all respondent EJP SOIL partner countries.

Policy knowledge was very high among stakeholders ranging from 75% (ecosystem services) to 92% (sustainable production) across all domains. Only 4% of stakeholders or less have limited knowledge in each domain.

5.2.5. Interest and Power distribution by domain

In this section the distribution of the number of stakeholders is shown for the corresponding levels of interest and power. A stakeholder's level of interest is a product of two variables impact and accountability, their level of power is a product of resources and influence. The graphics below illustrate the number of stakeholders with the various combinations of these variables as well as the overall distribution of the mapped stakeholders from low to high for both interest and power.
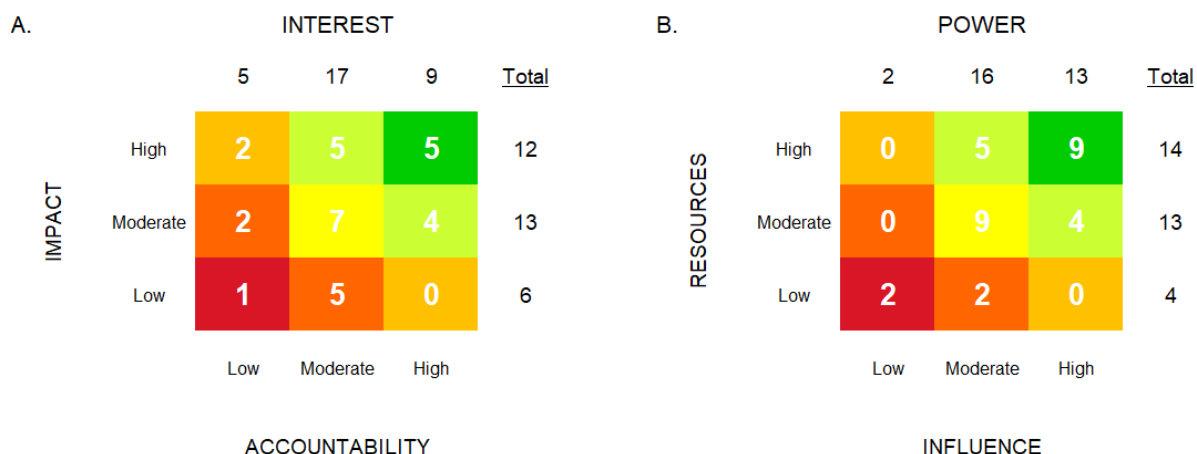
Climate Change Mitigation

Figure 19 Distribution of stakeholders based on the assigned scores for A) Interest and B) Power within the domain of climate change mitigation.

The majority of stakeholders had moderate ratings for impact and accountability (Fig. 19A) with greater numbers having high impact and accountability compared to low impact and accountability. With respect to power, the majority of stakeholders had moderate to high ratings for resources and influence (Fig.19B) resulting in a greater number having higher overall power scores.

Climate Change Adaptation

Figure 20 Distribution of stakeholders based on the assigned scores for A) Interest and B) Power within the domain of climate change adaptation.

A clear majority of stakeholders within this domain had moderate ratings for accountability and impact resulting in moderate to high interest scores in general (Fig. 20A). In contrast, ratings for resources and influence were moderate to high resulting in a greater number of higher power scores (Fig.20B) within this domain.

Sustainable Production

Figure 21 Distribution of stakeholders based on the assigned scores for A) Interest and B) Power within the domain of sustainable production.

Within the domain of sustainable production there was an almost equal number of high and low ratings for impact and mainly moderate ratings for accountability resulting in mainly moderate interest scores within this domain (Fig. 21A). With respect to power, scores tended to be higher based on greater numbers of high ratings for both resources and influence (Fig. 21B) within this domain.
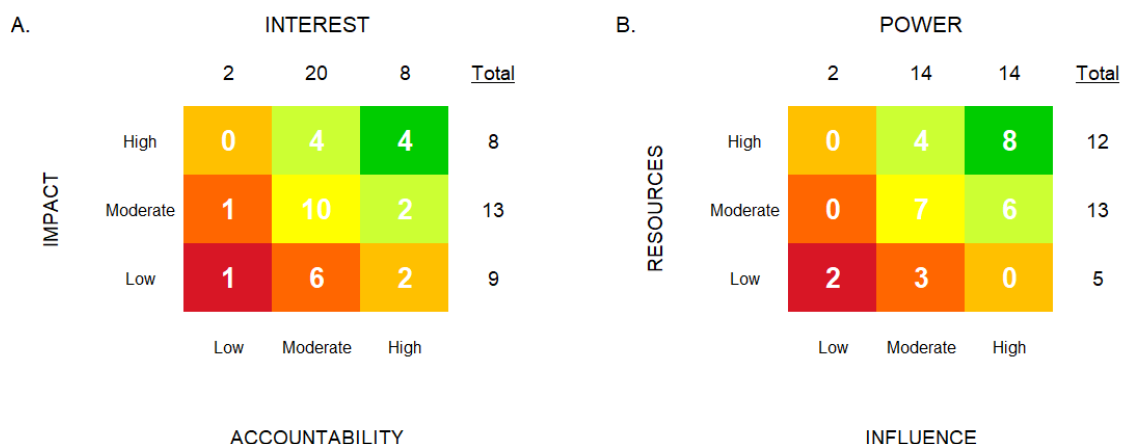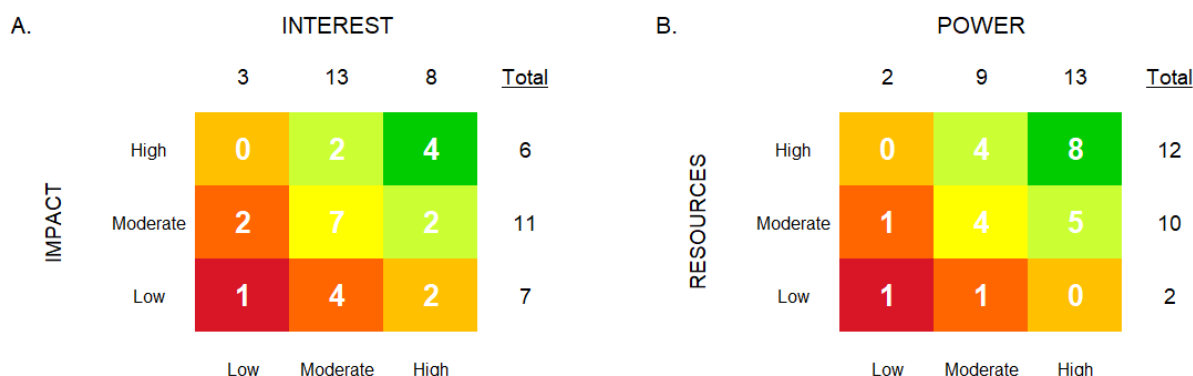
Ecosystem Services

Figure 22 Distribution of stakeholders based on the assigned scores for A) Interest and B) Power within the domain of ecosystem services.

Mainly moderate interest scores occurred within this domain also as a result of an equal number of low and high impact ratings as well as a majority of moderate ratings for both impact and accountability. Accountability ratings were mainly split between moderate and high (Fig. 22A). Power scores were generally moderate to high, however there were a greater number of low resource ratings compared to only two low influence ratings (Fig.22B).

Avoiding Land Degradation

A.

INTEREST

	3	20	12	Total
High	0	6	6	12
Moderate	2	7	4	13
Low	1	7	2	10

IMPACT

Low Moderate High

ACCOUNTABILITY

B.

POWER

	2	15	18	Total
High	0	4	10	14
Moderate	0	8	8	16
Low	2	3	0	5

RESOURCES

Low Moderate High
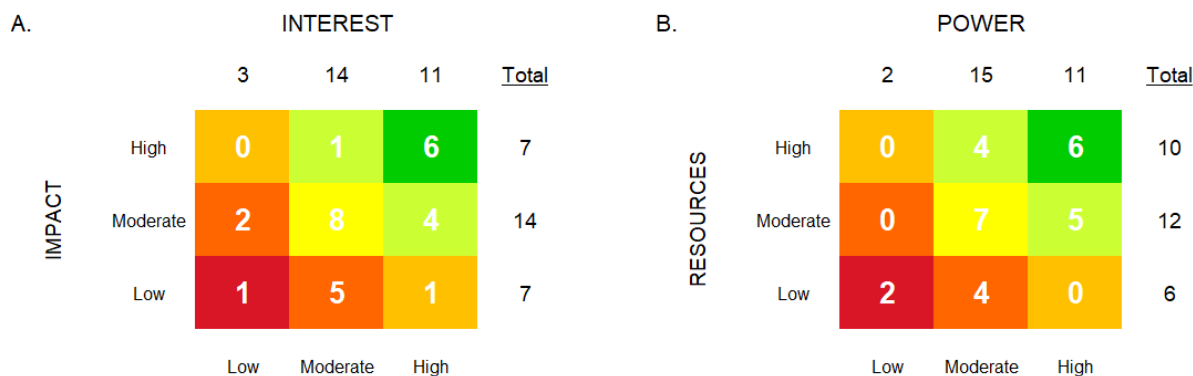
INFLUENCE
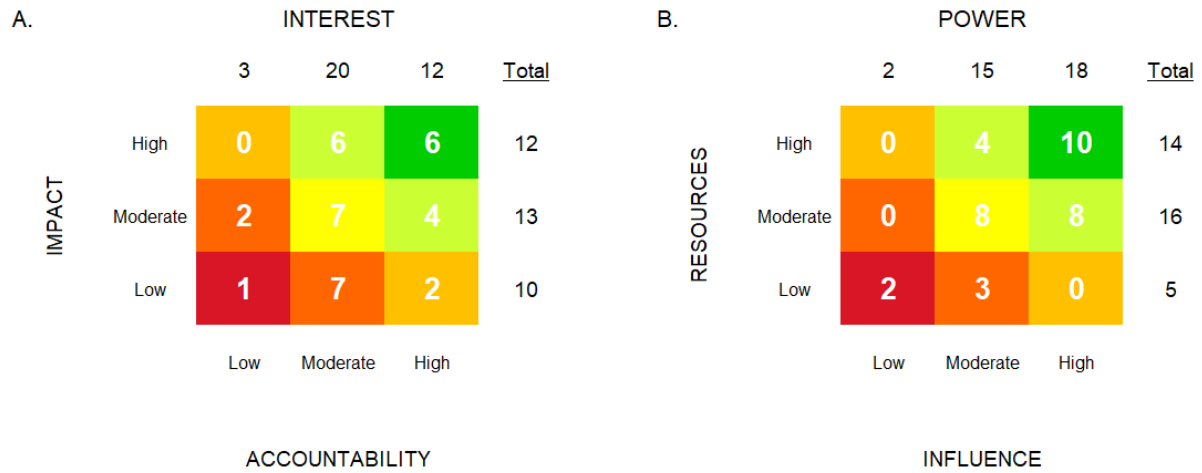
Figure 23 Distribution of stakeholders based on the assigned scores for A) Interest and B) Power within the domain of avoiding land degradation.

This domain fell within the expertise of the greatest number of stakeholders and scores for interest were mainly moderate. This can be attributed to the fact that impact ratings were relatively equally spread between low (10), moderate (13) and high (12) more so than any other domain (Fig.23A). Power scores were generally moderate to high, similar to previous domains with the majority of influence ratings falling into the high rank (Fig.23B).

6. Conclusion

The results of this initial WP8 stocktaking exercise provides a clear description and categorisation of the policy stakeholders that need engagement by the EJP SOIL consortium and WP8 "Science to Policy interaction. In particular this mapping exercise has provided understanding and insight into the stakeholder organisations within EU member states and the EJP SOIL domain areas that they engage with. This information provides a basis for targeting future WP8 needs assessment and dissemination activities in Task 8.2.1 Needs Analysis and Task 8.4.2 providing scientific evidence based recommendations.

Overall, D8.4 mapped stakeholders directly involved in the soil related policy cycle. The majority of these stakeholders mapped were policy designers and so are involved in the creation and conceptualisation of polices and involved in clarifying the objectives and goals of the policy being created. By engaging with these stakeholders the scientific evidence based recommendations derived from the EJP SOIL research findings could be disseminated to policy organisations involved in the early stages of the soil related policy cycle. Understanding the scale at which these stakeholders operate in addition to their knowledge of policy also provides the context within which this scientific evidence is communicated so that it can be fully understood by these stakeholders and used effectively. Further mapping of stakeholders with an indirect influence on the soil related policy will be undertaken in future WP8 activities.

The knowledge obtained from these policy stakeholder mapping and analysis activities will also provide the basis for wider communication across the science to policy interface by the EJP SOIL consortium and projects. Improved targeting of scientific information and recommendations for policy to the specific audience will ensure more effective communication across the science to policy interface.

7. Appendix A

7.1. Guideline Document

7.1.1. Section A: Background Information

- Unique ID – please complete by survey administrator. Consists of the member state selected from the drop down menu plus and survey number comprising of two digits, for example, the first respondent will be '01'.

- Member State – please select from the drop down menu provided.

- Environmental zone – please select from the drop down menu provided. Identify the environmental zone(s) using the classification by map is the result of a study by Metzger et al. (2005)2. It is the result of a principal component analysis (PCA) of 20 most relevant and available environmental variables (grouped under climate, geomorphology, oceanicity and northing), combined using an ISODATA principal component analysis (PCA) clustering, resulting into thirteen environmental zones.

- Stakeholder name – please complete for internal purposes only.

- Gender – please select from the dropdown menu provided.

- Age –please select from the age ranges available in the drop down menu provided.

7.1.2. Section B: Brainstorming Activity

Step 1 Identification of stakeholders

The main high level policy domains related to EJP Soil are: 1) Climate Change Mitigation; 2) Climate Change Adaptation; 3) Food Security; 4) Ecosystem Services Delivery Enhancement and 5) Avoiding Land Degradation. The first step in stakeholder analysis is the identification of the stakeholders. Here, each of the five initial stakeholders should identify five more key stakeholders in these policy domains (snowball sampling technique). It is possible that stakeholders will have more knowledge in some areas over others. The final list which should contain 25 stakeholders, will be shortlisted to a maximum of 5 top key stakeholders.

Respondents (the five initial stakeholders) should start with a blank sheet of paper, list those people or organisations that have an interest in these five EJP Soil related policy areas. It is advised to start with a wide list which can be subsequently narrowed.

- *Note: 'interest' indicates that they have a stake: so they may be affected by related policies, they have role in implementation or have a stated interest.*

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[2] Metzger, M.J., Bunce, R.G.H., Jongman, R.H.G., Mücher, C.A. and Watkins, J.W. (2005). A climatic stratification of the environment of Europe. *Global Ecology and Biogeography*, 14, pp. 549–563.

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- *Note: Consider if specific experience, expertise or technical knowledge stakeholders are important, for example, for carbon accounting mechanisms, which stakeholders can help identify implementation requirements.*
- *Note: Do not limit to 'obvious' stakeholders.*

Consider those people, businesses or organizations that may be affected by policy changes, or those who may have influence on or an interest in its conclusion or revision, for example, research and academia, non-governmental organisations, lobby organisations, national and international public authorities etc. Consider who has relevant information and expertise and who is responsible for implementation or application of a policy. Please complete this activity on a separate piece of paper. Think about this for each of the five policy areas listed above. This activity can be supported using the structured stakeholder test questions below:

To help systematically determine stakeholder eligibility the following key questions from the 'Six tests for Stakeholder Identification'[3] can be used:

Test: Who is directly impacted?	· Whose lives will change as a result of this policy? · Who cannot easily avoid being affected by this policy? · Who will have to change behaviour due to this policy?
Test: Whose help is required to make it work?	· Are there vital individuals or groups in the delivery? · Who will have the ability to obstruct implementation unless co-operating? · Who understands the likely impact of this decision on other stakeholders?
Test: Who thinks they know about it?	· Who has studied the subject and published views on it? · Who has detailed know-how that those implementing the policy should also understand? · Are there individuals or groups that will be perceived as knowledgeable on the subject?
Test: Who has interest in the topic?	· Are there organisations or individuals who think they have an interest? · Has anyone been campaigning about the issue? · Is there anyone publishing or broadcasting views on this subject?

Step 2 Shortlist

The second step of stakeholder mapping is the sorting of the identified stakeholder categories and relevant stakeholders for analysis in Section C. On the sheet of paper with a wide list of names, please circle the top five. Try to select one for each EJP Soil policy domain where possible. Where not possible, please still select the top five policy stakeholders. Altogether, shortlist the top five key

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[3] Source: The Consultation Institute, London (Bedfordshire)

stakeholders from the list and populate these actors into the excel sheet B) Part2_Shortlist. Prioritise stakeholders based upon the following:

1. Identify those that have a high relative influence over policy making, its implementation and evaluation.
2. Distinguish between how the different stakeholders are affected and consider a relative order of interest.

7.1.3. Section C: Stakeholder Analysis

The tools to complete this stakeholder analysis draw on existing tools and resources available to guide the stakeholder analysis process[4].

9. Stakeholder – This field will automatically populate from your shortlist.

10. Stakeholder Type/ Category – please select from the drop down menu. Use 'other write here' and complete manually if desired option unavailable.

11. Organisation (Which organisation do you represent?) – populate manually.

12 – 16. Please indicate which of the EJP Soil policy domains are relevant for this stakeholder.

17. Scale ranking – please indicate the scale of relevance for this stakeholder. If this stakeholder is engaged up to EU scale please select '3'. If this stakeholder works primarily at national scale, select '2' and if this actor is primarily sub-national at regional/local level please select '1'.

19. Knowledge of Policy: Please provide your best estimate of stakeholders knowledge about policy using the following ranking scheme: 1= limited/ none, 2=moderate, 3= high.

20. Interest based on impact – EJP Soil will generate outputs that aim to support tools and evidence base for policy making to support sustainable agricultural soils. This may result in changes to policies in relation to what and how they are implemented. The more significant the anticipated impact, the greater the interest. Please provide your estimate of how EJP Soil policy domains will impact this stakeholder? Please rank according to the following three levels: Maximum impact on group/individual; Moderate and will have measurable impact on the group/individual, Minimal impact on group/individual.

21. Interest based on accountability – Please provide your best estimate of how responsible this stakeholder is for science policy interface. Greater responsibility corresponds to greater interest.

Please rank based upon the following three levels: Maximum: Stakeholder has high accountability for the science policy process; Moderate stakeholder has a measureable accountability for the science policy process; Minimal accountability for the science policy process.

22. Power based on resources: this refers to the quantity of resources available to this stakeholder and their capacity to mobilise these resources. Resources can be financial, technological and political. Please provide your best estimate on stakeholder's capacity to mobilise resources using the three level ranking:
High = stakeholder can make decisions on allocation of policy resources, Medium= Stakeholder can access policy related resources, Low = Stakeholder cannot make decisions regarding the use of resources.

23. Power based on influence: please provide your best estimate of stakeholder influence using this three-category code: High, Medium, Low (Influence refers to the extent to which this stakeholder can persuade/coerce other to make decisions). High = This person/group has power of veto, formally or informally so their influence is central to achieving desired policy outcomes, Medium: Goals could be achieved without their support but not easily, Low: This person/group can do little to influence the policy outcomes.

8. Appendix B Mapping Tool Spreadsheet

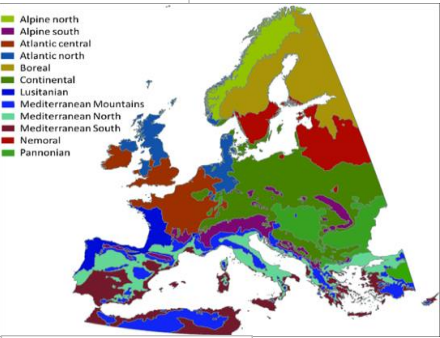*Table 12 Mapping tool template Section A: Background Information*

	In this section, please complete the general information about your country and you.			
		please select from dropdown lists were appropriate	ID (Country from dropdown)	ID (respondent number from 01)
	Unique ID (Assigned by survey administrator)			
1	Please indicate the scale that you mostly work at?			
2	If a national expert please indicate your Member State (select from dropdown list)			
3	environmental zone of your country considered in this file (select the relevant zone for the country from dropdown menu)			
4	Stakeholder name (for internal purposes only)			
5	Gender			
6	Age (select from ranges in drop down menu)			
7	Stakeholder group			
8	Which type of organisation do you represent?			
9	Position - what is your role in your organisation?			
	Knowledge base related to EJP Soil policy domains			
	Please rank your knowledge with respect to the following policy domains:			
10	**Climate Change Mitigation** (Policies to mitigate / limit climate change related to agricultural land)			
11	**Climate Change Adaptation** (policies that respond to changing weather patterns affecting agricultural soils)			
12	**Food Security** (Food and Agricultural Policies)			
13	**Ecosystem services** (Land based services - water purification/ regulation, and climate regulation, biodiversity, nutrient cycling)			
14	**Avoiding land degradation** (Sustainable agricultural management practices)			

Alpine north
Alpine south
Atlantic central
Atlantic north
Boreal
Continental
Lusitanian
Mediterranean Mountains
Mediterranean North
Mediterranean South
Nemoral
Pannonian

Metzer et al. 2005

Table 13 Mapping tool template Section B: Brainstorming Activity Step 1

Brainstorm stakeholder categories/stakeholers relevant for or interested in the EJP Soil related policy areas: The main policy domains related to EJP Soil include: 1) Climate Change Mitigation; 2) Climate Change Adaptation; 3) Food Security; 4) Ecosystem Services Delivery Enhancement and 5) Avoiding Land Degradation

Note: Interest indicates that they have a stake: so they can be affected by related policies; they have a role in implementation or have a stated interest.

Note: Consider if specific experience, expertise or technical knowledge stakeholders are important, for example, C-accounting which stakeholder can help identify implementation requirements

Note: Do not limit to 'obvious' stakeholders, identify target groups at risk of being excluded

Step 1. On a separate piece of paper please complete the following brainstorming activity. Please compile a list of all potential stakeholders by asking the following test questions (1 - 6). Please ask these test questions for each of the policy areas to capture a wide starting list (Climate change mitigation, climate change adaptation, food security, ecosystem services delivery and enhancement and avoiding land degradation). Consider those who will be affected by policy areas (e.g. beneficiaries) or those who might have a role in the execution / implementation (e.g. policy makers, authorities etc.).

Test 1 Who is directly impacted by policies related to the [e.g. climate change mitigation..] five areas? (whose daily/weekly lives will change? who cannot easily take steps to avoid being affected by this policy? Who will have to change behaviour?)

Test 2 Who is indirectly impacted? (Whose daily lives will change because others have been directly impacted by the policy? Who will gain or lose because of changes related to these policies?)

Test 3 Who is potentially impacted? (are there others who may have to adjust behaviour if conditions apply?)

Test 4 Whose help is needed to make it work? (Are there vital groups/individuals in policy delivery? Who is necessary for implementation? Who understands the impact on other stakeholders?)

Test 5 Who thinks they know about the subject? (Who has studies/published views? Who has knowledge that those implementing policy require? Are there individuals/groups that are considered knowledgeable on the subject?)

Test 6 Who will show an interest in the subject? (are ther other who think they have an interest? Has anyone campaigned/lobbied about this topic? Is anyone publishing/broadcasting views on the topic?)

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Table 14 Mapping tool template Section B: Brainstorming Activity Step 2

Step 2 Shortlist: The second step of stakeholder mapping is the sorting of the identified stakeholder categories and relevant stakeholders for analysis in Section C. Guided by the following sorting criteria, circle the top five for each category. Altogether, shortlist the top ten key stakeholders from the list and populate these actors below. Prioritise stakeholders based upon the following:

1.   Identify those that have a high relative influence over policy making, its implementation and evaluation.

2.   Distinguish between how the different stakeholders are affected and consider a relative order of interest.

Shortlisting activity
Step 2. Prioritise stakeholders and shortlist those who have direct interest and could affect the policy process / implementation. (Actors who do not have ability to affect specific policy should not be included). Circle up to a maximum of 10 key stakeholders to further analyse in the next sheet "C) Analyse_Stakeholders"

1	
2	
3	
4	
5	

Table 15 Mapping tool template Section C: Stakeholder analysis

Please populate with outcomes of section B) Brainstorming Stakeholders and input responses for the 5 key stakeholders

	Stakeholder			Policy domains that stakeholder engages with (Yes, No)					Stakeholder attributes (Bridging & Knowledge capacity)			Interest (Impact and Accountability)		Power	
	9. Stakeholder	10.Stakeholder Type/ Cateogry	11. Organisation (Which organisation do they represent?)	12. Climate Change Mitigation (Policies to mitigate / limit climate change related to agricultural land)	13. Climate Change Adaptation (policies that respond to changing weather patterns affecting agricultural soils)	14. Food Security (Focus for this analysis is on the Common Agricultural Policy (CAP))	15. Ecosystem services (Land based services - water purification/ regulation, and biodiversity)	16. Avoiding land degradation (Sustainable agricultural management practices)	17. Scale ranking: Bridges national and EU scale (3), National scale (2), regional/local (1)	18. Internal (I) (implement policy) / Knowledge (K) (technical, scientific) / External (E)(All others)	19. Knowledge of Policy: Please provide your best estimate of stakeholders knowledge about policy (Limited/ none, Some, A lot)	20. Impact - please provide your estimate of how EJP Soil activities related to policy domains will impact stakeholder? Maximum impact on group/individual; Moderate and will have measurable impact on the group/individual, Minimal impact on stakeholder(s)	21. Accountability: Maximum: Stakeholder has high accountability for the science policy process; Moderate stakeholder has a measureable accountability for the science policy process; Minimal accountability for the science policy process	22. Resources: please provide best estimate on stakeholders capacity to mobilise resources. High = stakeholder can make decisions on allocation of policy resources, Medium= Stakeholder can access policy related resources, Low = Stakeholder cannot make decisions regarding the use of resources.	23. Influence: please provide your best estimate of stakeholder influence using this three-category code: High, Medium, Low (Influence refers to the extent to which this stakeholder can persuade/coerce other to make decisions). High: This person/group has power of veto, formally or informally so their influence is central to achieving desired policy outcomes Medium: Goals could be achieved without their support but not easily Low: This person/group can do little to influence the policy outcomes.
1	X	Public administrator/policy maker	X	Yes	Yes	No	Yes	Yes	2	I	Some	Maximum	Maximum	High	High
2	X	Farmer/Farmers association	X	Yes	Yes	Yes	Yes	No	2	I	A lot	Minimal	Moderate	Low	Low
3	X	Agrarian advisory technician	X	Yes	Yes	No	Yes	Yes	2	K	Some	Maximum	Moderate	High	High
4	X	Researcher	X	Yes	Yes	No	No	No	2	K	A lot	Moderate	Moderate	Medium	Medium
5	X	other, write here	X	Yes	Yes	Yes	Yes	Yes	3	K	A lot	Minimal	Minimal	Low	Low