

Healthy soils contribute to societal wellbeing

Understanding public perceptions of soil contributions across Europe

Background:

Healthy soils provide food, biomass, and raw materials while regulating water, carbon, and nutrient cycles and sustaining plant productivity as well as animal, and human health and wellbeing. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) defines these as nature's contributions to people (NCP). In line with IPBES, SOILGUARD refers to soil-related NCPs as "soil-mediated contributions to people (SmCPs)."

In the attempt to integrate the diversity of contributions of healthy soils in policies and management practices, SOILGUARD has closely evaluated people's attitudes, worldviews and perceptions about these SmCPs and the importance they ascribe to them and how they vary between individuals, stakeholders, groups and regions. To address this gap, SOILGUARD surveyed 500 respondents in Denmark, Ireland, and Spain on 18 SmCPs and their views on European soil policies.

Category	Soil-mediated contributions to people (SmCP)
Regulating	Regulation of freshwater quantity
	Regulation of detrimental organisms
	Soil formation and protection
	Climate regulation
	Habitat creation
	Pollination
	Regulation of air quality
	Regulation of freshwater quality
	Regulation of hazards and extreme events
	Regulation of ocean acidification
Material	Food and feed production
	Energy production
	Production of materials
	Production of medicinal resources
Non-Material	Physical and psychological experience
	Learning and inspiration
	Supporting identities
	Maintenance of options



Key takeaways:

- Soils have an essential value to people.
- People value soils and soil-mediated contributions differently in different countries.
- The results improve the basis for regionally differentiated decision-making in soil management.





Key Outcomes

The ranking exercise reveals region-specific priorities, providing an insight into the environmental and societal concerns most relevant for the countries. The diagram shows the share of respondents per country that ranked a given SmCP among their top 5.

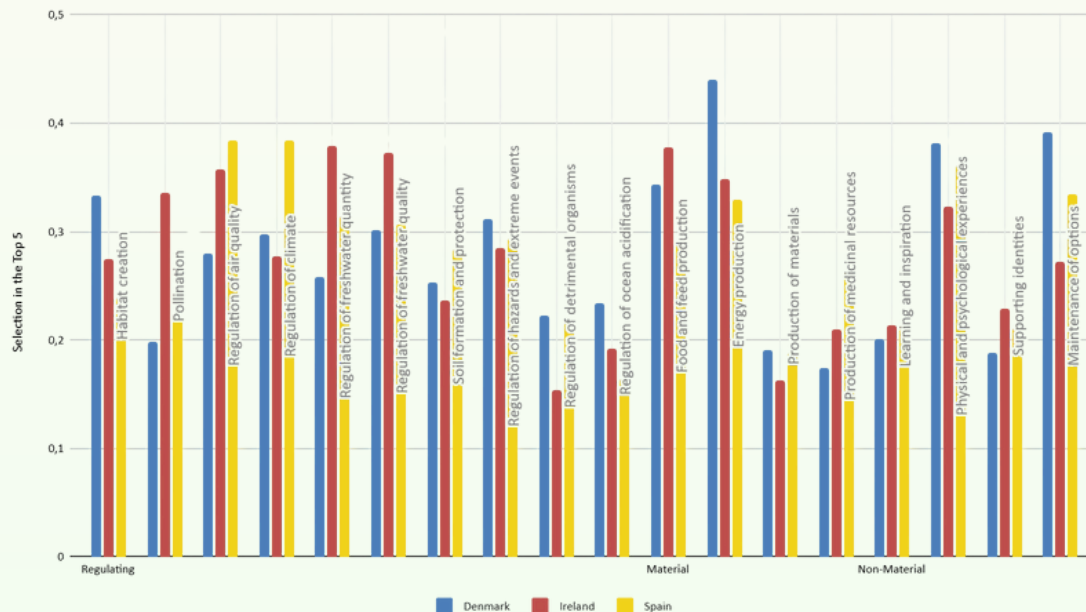


Figure 1: Socio-cultural values – SmCPs ranked among the top 5

- Soils are very complex ecosystems and their functioning difficult to grasp for the public. Accordingly, those SmCPs, where the connection between land use and the provision of SmCPs are not directly perceptible, seem to be of lesser importance to people (such as learning and inspiration or supporting identities)
- Those SmCPs, which are more directly perceptible and play a role in the reality of people’s life (such as food and feed production, energy production or physical and psychological experience) appear to be higher ranked in all countries
- In Denmark, the top priority is given to energy production. This may indicate that the use of landscapes for energy production plays here a very important role, even if it might not be directly associated with healthy soils
- Regulating SmCPs like regulation of climate as well as freshwater quantity and quality are comparatively easy to understand and appear to be quite important, at least in Spain and Ireland. The more obvious climate change effects in Spain (e.g., in terms of drought) may serve as a possible explanation of a higher ranking of climate regulation.
- The agreement to EU policies that aim to support a more sustainable management practice (financial support of a change from conventional to organic farming practice, support of sustainable management practices, reduction of fertilizer use) is generally high among all three countries (from approximately 60-80% agree or strongly agree)
- Respondents in Spain reveal the highest agreement according to all questioned policy measures.
- Denmark showed the highest disagreement on policies which support a change from conventional to organic farming practices and which aim to reduce fertilizer use.

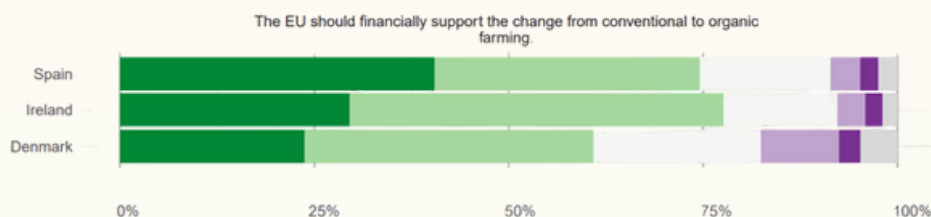


Figure 2: Agreement to the statement "The EU should financially support the change from conventional to organic farming."

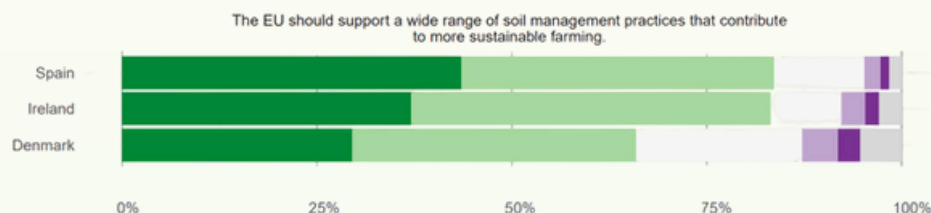


Figure 3: Agreement to the statement "The EU should support a wide range of soil management practices that contribute to more sustainable farming."

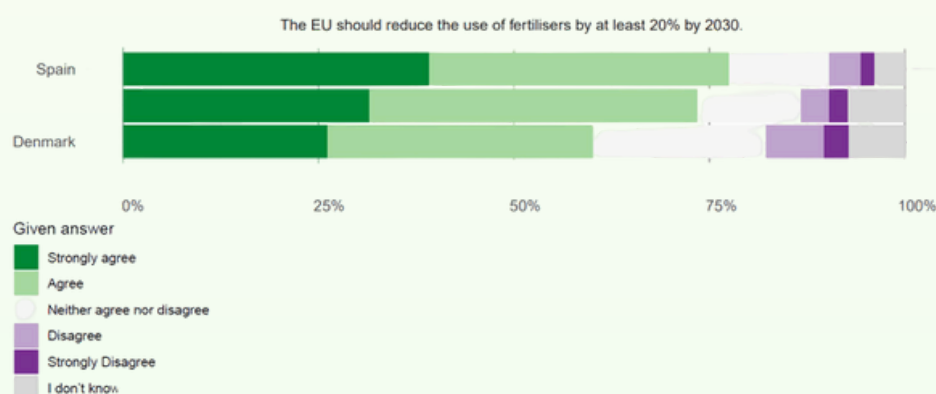


Figure 4: Agreement to the statement "The EU should reduce the use of fertilisers by at least 20% by 2030."

The level of agreement to EU policies on biodiversity and sustainable land management practices was measured by respondents' agreement to different statements on a scale from 1 (strongly disagree) to 5 (strongly agree), which were build based on objectives of the European Common Agricultural Policy (CAP) and the Farm-to-Fork Strategy. The aggregated support for policy measures was highest in Spain (mean value: 4.13) and Ireland (mean value: 4.06), with lower agreement in Denmark (mean value: 3.8). The results of selected statements are shown in the figures 2-4.

Recommendations for Policy:

Poorly managed soils and soil degradation lead to a loss of the broad range of the benefits, which healthy soil ecosystems provide. This affects different beneficiaries: a decrease in nutrient availability and water storage capacity will negatively influence yield stability and thus, harm farmers, while increasing carbon storage due to a higher soil biodiversity makes soils an ally for climate change mitigation, and thus, benefits society at large. The different effects must be weighed up when making management decisions, as they may also be associated with conflicting interests. This is the case, for example, when a management change to organic farming leads to lower yields but is associated with high social benefits.

Our analysis has shown that soils have an essential value to people, but also that people value soils and soil-mediated contributions differently in different countries. The analysis increases our understanding of socio-cultural values and regional differences, which improves the basis for regionally differentiated decision-making in soil management.

Both, the EU Soil Strategy and the EU Biodiversity Strategy highlight the benefits of healthy ecosystems for societal wellbeing and require to consider Smcps in management and policymaking.

Further reading:





SCAN HERE

SOILGUARD

Sustainable soil management to unleash soil biodiversity potential and increase environmental, economic, and social well-being