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# Soil Monitoring Law assessment





# Assessment of the European Commission proposal for a Soil Monitoring Law

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# Introduction

In November 2021, the European Commission published the EU Soil Strategy for 2030, a vital component of the European Green Deal, setting out a framework for the protection, restoration and sustainable use of European soils. In this strategy, the Commission committed to put forward a new legislative proposal on soil, the Soil Health Law. On 5 July 2023, the Commission published its proposal for an EU Directive on Soil Monitoring and Resilience ('Soil Monitoring Law', SML).

An ambitious Soil Law is a precondition for the success of the European Green Deal objectives, recognising that healthy soil is crucial for attaining climate neutrality, halting and reversing biodiversity loss, achieving zero pollution, food and water security and circular economy. In addition, the costs of inaction on soil degradation are significant: As stated in the Soil Strategy, the cost of inaction on soil degradation outweighs the costs of action by a factor of six.

In the current political debate, there is a pervasive misunderstanding where nature restoration is mistakenly seen as conflicting with and competing against food security. The flaws of this misconception become particularly evident when it comes to soil biodiversity. Soil biodiversity has a particularly direct and mutual beneficial relationship with agricultural production, farm income and their resilience as well as restoration of biodiversity and biogeochemical cycles. Healthy soils and intact soil biodiversity are the bedrock of food security. They not only ensure high yields, but also much-needed resilience to climate change-induced weather events. Protecting soil health is an investment in our future food supply and provides long-term resilience to farmers' livelihoods.

An EU legislation protecting soils is long overdue and we welcome the Commission's initiative to put forward a proposal for a Directive on Soil Monitoring and Resilience. However, there are some notable shortcomings in the current proposal. As it stands, the proposal falls short of enabling the achievement of healthy soils in the EU by 2050. The change of the name of the legislation, which was originally planned to be called 'Soil Health Law', is symbolic of its lack of ambition and its shift away from soil health towards largely soil monitoring. The proposal lacks ambition and must be significantly improved to lead to effective change. In light of this, we invite the co-legislators to consider the following elements.

## I. Targets and ambition

### Strengthen the overarching objective

#### *Article 1*

The proposed Directive sets overarching objectives to put in place a monitoring framework and to continuously improve soil health with the view to achieve healthy soils by 2050. While it is positive that the proposal reiterates the 2050-target of the Soil Strategy, this target is only mentioned as a perspective and a potential consequence of action. It does not impose an obligation on Member States to achieve the 2050-target nor does it set any other intermediate targets.

**RECOMMENDATION** We recommend that the SML should include a clear legally binding obligation for Member States to achieve healthy soils by 2050, alongside intermediate targets for 2030 and 2040.

## Include legally binding targets on priority issues

### *New article*

In addition to the lack of legally binding time bound targets, the proposal does not set targets for priority issues such as the restoration of soil biodiversity. Such targets are necessary tools to measure progress and hold Member States that fail to meet their commitments accountable.

**RECOMMENDATION** For this reason, we suggest including medium- and long-term binding targets for priority issues, for example for restoring soil biodiversity, reducing topsoil and subsoil compaction, increasing humus buildup in agricultural soils, stopping erosion on land with unsustainable erosion risk, reducing pesticide residues in soil and achieving zero net land take by 2050 among others. The SML should also refer to the peatland-related restoration target which is still to be agreed in the Nature Restoration Law as a baseline and set additional requirements on peatland restoration and protection.

## II. Governance and finance

### Require Member States to draw up soil health plans

#### *New article & Article 18*

We welcome the reporting provisions that the proposal sets for Member States. However, it is regrettable that the proposal does not include an obligation for Member States to establish soil health plans or programmes of measures. Such plans are necessary tools to define the obligations of competent authorities and ensure effective action, traceability and accountability as well as identify funding sources for those measures.

**RECOMMENDATION** The SML should adopt a more comprehensive approach by requiring Member States to develop soil health plans. These plans offer a straightforward path for Member States to meet the Directive's objective. These mechanisms are not burdens but rather indispensable tools that facilitate implementation of the Directive for Member States. They ensure that when monitoring indicates poor soil health, action must be taken.

### Maintain provisions on access to justice and information to the public

#### *Articles 19 & 22*

We welcome the inclusion of specific articles on information to the public and access to justice. This is a right step towards ensuring better enforcement and implementation of the law and promoting environmental democracy. These rights allow for increased accountability of public authorities, which is a fundamental democratic principle in a community of law, such as the EU. The EU is also legally bound to ensure these rights by the EU Treaty, the Aarhus Convention and other international human rights treaties.

**RECOMMENDATION** Articles 19 and 22 provide necessary provisions on access to justice and information to public. While these articles hold a significant merit, it is important to acknowledge that their effectiveness relies heavily on the accompanying governance structure. To fully harness the

potential of these articles, it is imperative to establish a robust governance framework, which includes legally binding targets and mandatory soil health plans.

## Introduce a safeguard to prevent financing via carbon offsets

### *New article*

The very nature of soil organic carbon makes it unsuitable for certification as a carbon removal credit on carbon markets and for offsetting. There are significant challenges related to additionality and quantification, as well as a lack of clarity and ambition when it comes to ensuring long-term storage and sustainability of soil carbon removals credits for carbon markets. Financial contributions directed towards climate-friendly soil management activities should be carefully structured to create positive impacts on other social and environmental objectives, including the broader EU-wide goals of soil protection, restoration of soil health and economic and ecological performance of the agri-food system. In addition, soil health certificates, as described in the SML proposal, have no practical potential to increase the environmental resilience or economic value of carbon removal certificates. This is due to the hurdle of comparatively high costs related to the soil health monitoring methodology currently proposed and due to the lack of functionally integrated soil biodiversity, a key descriptor for overall ecosystem integrity and resilience.

**RECOMMENDATION** The SML should recognise that selling carbon removal certificates as credits on carbon markets is not an adequate financing mechanism for the law and as a minimum introduce a safeguard against it in recitals. It cannot bring the necessary and urgent trend reversal in the health of European soils or the sustainability transformation of the European agricultural sector.

## Mobilise the necessary financial resources

### *Article 17*

The proposal specifies that the implementation of this Directive should be supported by existing EU and national financial programmes. As indicated in the Impact Assessment, highest cost points are likely to be associated with the implementation of sustainable soil management measures.

When considering the financing of such measures, opportunity costs and their development over time must be highlighted. Rather than perceiving land use and nature restoration as fundamentally competing, the SML provides a great opportunity to highlight the synergies of nature-friendly land use. The resilience of the EU agri-food system and its yields are intrinsically linked with the health of soils. There is growing appeal in investing in sustainable soil management and transforming agricultural production methods. However, many farms are locked into their existing machinery and the agricultural training of their staff. Additionally, there are socio-economic pressures, rising lease and land prices, low planning security, and associated relatively high transfer costs in the initial years. To ensure the transition to sustainable soil management, comprehensive transfer and incentive financing is needed.

**RECOMMENDATION** In order to finance EU wide protection and restoration of soil health and the sustainable use of soils, the Soil Law should establish a link to the CAP and to future reforms of the CAP which should reward farmers for good stewardship of land and natural resources and for the delivery of ecosystem services. Current CAP Strategic Plans should be improved to systematically

focus on soil health and support for more sustainable soil management practices should be strengthened.

### III. Monitoring and assessment of soil health

#### Ensure effective soil health assessment and focus on soil biodiversity

*Articles 4, 6, 7, 8, 9 & Annex I*

The proposal requires Member States to establish soil districts. Although it sets a minimum alignment with the number of NUTS 1 territorial units, which is too broad, it is positive that Member States must consider environmental and climatic parameters.

According to the Impact Assessment, the monitoring grid will establish approximately 210 000 sampling points. Even though this represents a significant increase from the current situation, this is not sufficient to create a complete overview of soil health across the EU and lead to concrete action.

The proposal outlines a series of soil descriptors that must be met to assess soil as being in good health. These descriptors are divided into three categories: Part A descriptors with criteria for healthy soil condition established at EU level; Part B descriptors with criteria set at Member State level; and Part C descriptors without criteria. As a result, Part C descriptors, while subject to monitoring and trend analysis, are not attributed thresholds and thus are not factored into the assessment of soil health. Soil biodiversity currently falls under Part C of Annex I, which means that Member States are not obliged to consider it when assessing soil health. Moreover, soil biodiversity is defined by a descriptor that does not align with the latest scientific understanding and offers an incomplete picture of soil life.

According to a recent study<sup>1</sup>, soil is likely home to 59% of species which makes it the singular most biodiverse habitat on Earth. While the proposal acknowledges the importance of soil biodiversity, it falls short in adequately emphasising its particularly functional role for soil ecosystem services. This results in a proposal that endeavours to measure soil health while working with an incomplete understanding of soil health and therefore offering incomplete solutions. The consequence is significant: losing essential roles in soil ecosystems also means forfeiting the associated benefits.

**RECOMMENDATION** Therefore, the SML should align with over a decade's worth of progress in modern soil science, recognising soil biology's fundamental role in providing and regulating soil ecosystem services. Consequently, it should include adequate and scientifically robust soil biodiversity descriptors, capable of capturing the complexity of life within soil. Monitoring of these descriptors should be mandatory. In addition, the SML should include a legal mechanism that will oblige Member States to set criteria for soil biodiversity descriptors after the first round of data collection.

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<sup>1</sup> M. A. Anthony, S. Franz Bender & M. G. A. van der Heijden (2023): "Enumerating soil biodiversity". Proceedings of the National Academy of Sciences 120 (33). Link: <https://www.pnas.org/doi/abs/10.1073/pnas.2304663120>

## Create clear pathways between soil health data and land users

### Article 9

The proposal states that Member States should communicate soil health data and assessment to the relevant land owners and managers upon their request. Monitoring and assessment of soil health should not only provide general information to the Commission, Member States and the public, but should be part of a farmer- and soil biodiversity-based strategy to improve soil health.

**RECOMMENDATION** For this reason, the SML should ensure that soil health data and assessment is communicated to the relevant land owners and managers by default. This would enable farmers to make use of this data, to increase their knowledge of the biodiversity in their soil and empower them to adopt more sustainable practices.

## IV. Responsibility

### Make polluters pay

#### *New article*

The Explanatory Memorandum states that the proposal will improve the application of the polluter pays principle. However, it does not introduce innovative mechanisms that would effectively enforce this principle for overall soil pollution.

**RECOMMENDATION** The Soil Law should ensure that big players whose activities degrade soil are held accountable and contribute financially to the monitoring and soil health restoration. One approach could involve the implementation of an Extended Producer Responsibility (EPR) Scheme, a concept already included in the Commission's proposal for a revision of the Urban Wastewater Treatment Directive. EPR is a strategy that places the responsibility for managing the entire life cycle of a product on the producer rather than on the consumer or the taxpayer. Such a scheme not only promotes accountability but can serve as an additional funding source for Member States.

#### *New article & article 15*

In addition, the SML should clearly assign the responsibility to clean up contaminated sites to the polluters of these sites. It makes no attempt to fill the gaps left by the Environmental Liability Directive (ELD). The ELD ensures that environmental damage is remediated by imposing liability on the polluter but provides exemptions for cases where environmental damage has been caused within the emission limits of a legally valid permit and does not make financial guarantees.

**RECOMMENDATION** The SML should explicitly specify that competent authorities are tasked with identifying the entity responsible for the soil contamination. They must ensure that this entity covers the costs of the risk reduction measures, regardless of whether the contamination occurred within a legally valid permit. Furthermore, the SML should include a provision for mandatory financial guarantees, similarly to Article 14 of the Extractive Waste Directive (2004/35/EC).



## V. Sustainable soil management

### Make sustainable soil management practices mandatory

#### *Article 10 & Annex III*

The proposal lays down a set of sustainable soil management principles that Member States must translate into concrete practices. However, the proposal does not include a minimum set of practices that must be respected, nor does it ban particularly harmful practices. Recital 38 highlights the crucial role of economic instruments such as those under the CAP in the transition towards sustainable management of agricultural soil. This link must be strengthened.

**RECOMMENDATION** The SML should stress that the general list of common principles is an absolute minimum regarding sustainable management of soils. In addition to such a list for guidance purposes, the law should establish a set of mandatory sustainable soil management practices for all land and soil users, building on the conditionality rules currently set by the CAP. These should include at least Good Agricultural and Environmental Conditions (GAEC) on sustainable soil management practices (GAEC 5, 6 & 7), but also conditionalities regarding climate change (GAEC 1, 2 & 3), water (GAEC 4) and biodiversity (GAEC 8 & 9), all of which have an important impact on organic matter build-up, soil pollution run-offs or soil biodiversity. The SML should emphasise that these requirements are the bare minimum of sustainable soil management practices and that further practices should go beyond them.

### Ensure application of the no net land take by 2050-principle

#### *Article 11*

Regarding land take, the proposal primarily focuses on outlining mitigation principles. It does not include a target on land take – legally binding or not. The language of the article is weak, aiming at reducing the area affected by land take “to the extent possible”. It is unclear why a ‘no net land take by 2050’ target has not been included, although it is reiterated by the European Commission in the 7th Environment Action Programme to 2020, the Roadmap to a Resource Efficient Europe and the EU Soil Strategy for 2030.

One key concern arises from the proposal’s definition of land take, which includes the categorization of agricultural land as semi-natural land. This implies that agricultural land holds “potentially high value in terms of biodiversity and ecosystem services it provides”. This adds unnecessary complexity when the focus should be on measuring the simple extension of arterialised areas, for example through urbanisation, mining, the formation of landfills or similar.

**RECOMMENDATION** In addition to including a legally binding ‘no net land take by 2050’-target, the SML should set binding milestones for 2030 and 2040. The SML should also explicitly endorse the ‘land take hierarchy’ as outlined in the Soil Strategy. The definitions of natural and semi-natural land should be removed and replaced within the land take definition with the term “non-artificial land”. This would avoid divergent interpretations that would make the measurements conducted by different Member States inconsistent.



## VI. Contaminated sites

### Ensure effective cleaning up of contaminated sites

*Article 12, 13, 14, 15 & 16*

The proposed Directive takes a step in the right direction by requiring Member States to identify all potentially contaminated sites within a specific time frame and by including a register of contaminated sites. However, the articles grant Member States significant flexibilities, particularly concerning deadlines, content, form and prioritisation of soil investigations. Furthermore, the Commission has opted for an approach where risks to human health and the environment must be kept to acceptable levels. This provides Member States with significant flexibility in defining an “unacceptable risk”, potentially leading to lax definitions and a race to the bottom.

**RECOMMENDATION** Rather than establishing requirements that merely serve as the bare minimum for safeguarding the well-being of citizens and the environment against toxic pollution, the SML should ensure harmonisation among Member States. This can be achieved by setting mandatory EU-wide thresholds for a list of key pollutants, exceedance of which would mandate immediate action from Member States. They should be subject to regular updates and be complemented at Member State level by specific pollutants identified by Member States. Furthermore, the Directive should set deadlines by which Member States should investigate all potentially contaminated sites and assess the associated risks. It should set out clear rules for soil investigations, risk assessments and management of contaminated sites.

### Tackle the problem of diffuse pollution

*New article*

It is positive that Annex I of the proposal includes the concentration of heavy metals in soil as one descriptor for soil contamination when assessing health of soil. In addition, Member States must establish a list of organic contaminants to be monitored. However, pesticide residues and other contaminants originating from excessive intentional application and diffuse pollution are not explicitly mentioned in the current proposal even though monitoring of these substances is essential to assess distribution risks and trends of soil contamination.

**RECOMMENDATION** The SML should include a list of key pollutants with threshold for which monitoring is mandatory and that should be included in the assessment of soil health. Chemicals that should not be present in a soil considered healthy include chemicals identified as ecotoxic, persistent, bioaccumulative, mobile and toxic, by any EU regulation. In addition to heavy metals, this list should include at least active substances from a priority list of pesticides, microplastics, PFAS, veterinary products and pharmaceuticals.

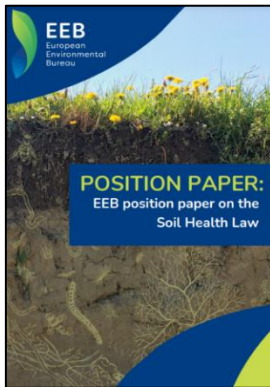
## Conclusion

Achieving healthy soil ecosystems by 2050 is not a nice-to-have – it is a necessity. Our very existence and means of sustenance are deeply intertwined with the state of our soils. Healthy soils are the foundation of our food production and a key element of intact water cycles. They play a vital role in

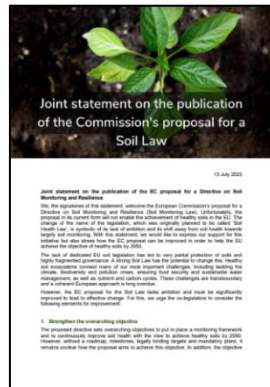


both adapting to and mitigating climate change. When our soils are in poor health, all these crucial elements of the European Green Deal crumble. Realising soil health and safeguarding the associated benefits necessitates proactive action. Soil protection has been postponed for far too long and it is now high time to ensure that it is addressed comprehensively: through an ambitious Soil Law, centred on promoting soil health, equipped with a robust governance toolbox and placing a strong emphasis on soil biodiversity. We invite the European Parliament and the Council to consider the elements outlined in this assessment during their negotiations on this legislation. The Commission's proposal for a Soil Monitoring Law is a start – now it must be improved upon to secure the future health of European soils.

## More information:



[EEB Position Paper on the Soil Health Law](#)



[Joint NGO statement on the Soil Monitoring Law proposal](#)



[Joint open letter by the Soil Health Law Coalition](#)



[Joint Position Paper by the Soil Health Law Coalition](#)

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