

OPEN PUBLIC CONSULTATION ON THE NEW SOIL STRATEGY

Fields marked with * are mandatory.

Introduction

Soil is the material in the top layer of the surface of the earth in which plants grow, and it is formed by living organisms, organic matter as well as water, air and mineral particles. **Soil is an extremely complex, variable and living medium, which is critical for life on Earth.** Soil is a non-renewable resource in that the degradation rates can be rapid whereas the formation and regeneration processes are extremely slow. **Soil is an essential ecosystem** hosting an incredible amount of biodiversity that delivers valuable services such as the provision of food, energy and raw materials, carbon sequestration, water regulation and purification, regulation of droughts and floods, nutrient regulation, pest control and recreation. Therefore, soil is crucial for addressing some of the greatest societal challenges of our time: the fight against **climate change and biodiversity loss**, the protection of **human health** and ensuring **food safety and security**.

Land is the space required for living, as well as natural space, cultural space, economic space, and recreational space. When covering soils by buildings, constructions and layers of completely or partly impermeable artificial material (soil sealing), the benefits of using land go to either a community or a single individual or business, while the detrimental effects are shared by society at large. Valuable farmland is built over, the surface of the ground is sealed and most ecological functions of the soils are destroyed.

Soils are dramatically degrading at European and global level, as portrayed by the European Agency's [2020 State of the Environment Report](#), [the Special IPCC report on Climate Change and Land](#) and [the IPBES Assessment Report on Land Degradation and Restoration](#). Erosion, loss of organic matter, compaction, contamination, sealing, salinization, landslides and desertification have negative impacts on human health, natural ecosystems and climate, as well as on our economy. Land and soil degradation have transboundary effects such as CO₂ emissions from soil organic carbon and loss of biodiversity, hampering EU food security through reduced production of food commodities traded in the internal market, hampering water quality across borders through contaminants and sediments in river basins, food safety concerns from soil contaminants. Poor land management, such as deforestation, overgrazing, unsustainable farming and forestry practices, construction activities and soil sealing, as well as pollution from industrial emissions, air deposition or contaminants present in fertilisers or sewage sludge applied to soil, are among the main causes of this situation.

All main drivers of biodiversity loss – changes in land and sea use, overexploitation, climate change, pollution, invasive alien species – can be traced back in one way or another to the health of our land and soils. [The EU Biodiversity Strategy for 2030](#) announced the adoption of a new Soil Strategy in 2021, reviewing [the 2006 EU Soil Thematic Strategy](#). The aim will be to address soil- and land-related issues in a comprehensive way. The EU Biodiversity Strategy for 2030 highlighted that significant progress is needed

on issues such as protecting soil fertility, reducing soil erosion and sealing, increasing soil organic matter, identifying and remediating contaminated sites, restoring degraded soils, defining the conditions for their good ecological status, introducing restoration objectives, and improving monitoring.

However, action at EU level is not starting from scratch. The new Soil Strategy will build on and step up [existing activities](#) aiming at preventing soil and land degradation and restoring soil health.

Guidance on the questionnaire

This public consultation aims at gathering the views of EU citizens, including stakeholders and experts, on the elements to be considered in the upcoming Soil Strategy. The results of the consultation will also underpin various soil-related initiatives under preparation by the Commission, e.g. the legally binding EU nature restoration targets, the soil aspects of [the Zero Pollution Action Plan](#), etc.

The aim is to ensure that all relevant stakeholders that may have an interest in soil and land protection and restoration and beyond, have an opportunity to express their views on the problem of soil and land degradation and an EU approach to tackle it.

You are invited to respond to the following questions below regardless of your level of expertise.

The questions cover the following topics:

1. **The importance of soil and land**
2. **Causes of soil and land degradation**
3. **How to address soil and land degradation effectively**
4. **Final remarks** (if you wish to provide specific comments or upload a document that you think is relevant to better explain your views).

I. The importance of SOIL and LAND

Land and soil provide the principal basis for human livelihoods and well-being. Human use directly affects more than 70% of the global, ice-free land surface. And **Europe's land is one of the most intensively used geographic areas on the globe**. It has the highest proportion of land (up to 80 %) used for settlement, production systems (in particular agriculture and forestry) and infrastructure. Human health depends on soil: soil provides 95% of the food we eat and it purifies the water we drink. However, soil may be contaminated by heavy metals or chemicals that may negatively impact human health and ecosystems.

1. How well do you consider yourself informed about the quality of soils in your local area, region or country, at EU or global level?

	well informed	somewhat informed	not well informed	not at all informed	I don't know / no opinion
* your local area	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* region	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* country	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* EU level	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* global level	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Which soil ecosystem services do you consider as the most important?

	high importance	moderate importance	low importance	not at all important	I don't know / no opinion
* the supply of nutritious and healthy food	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* the provision of feed, fibre, timber, biomass and soil as a material	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* water purification and maintaining good quality of freshwater, including ground and drinking water	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* climate adaptation and building resilience to extreme climate events, such as droughts and floods (e.g. through naturally retaining water)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* hosting many organisms and preserving habitats which are essential for biodiversity (e.g. earthworms, beetles, mites, etc.)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* preserving our cultural heritage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* carrying different landscapes and infrastructure for our society and recreation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* carbon sequestration, removing and capturing greenhouse gases from the atmosphere	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* nutrients cycling, such as nitrogen, phosphorus and sulphur



3. How would you rank the importance of protecting soil health/quality and its restoration at EU level?

- very important
- important
- neither important nor unimportant
- not at all important
- I don't know / no opinion

* 4. For those respondents who are land users (who regularly undertake activities related to management of land and soil, e.g. farmers and foresters), to what extent do soil health/quality considerations influence your activities and management choices?

- to a large extent
- partly
- to a small extent
- not at all
- I don't know / no opinion

II. Causes of soil and land degradation

5. Soils are fragile and take hundreds of years to form but can be degraded in hours. To the best of your knowledge, which of the following human-activities contribute most to soil and land degradation?

	high importance	moderate importance	low importance	not at all important	I don't know / no opinion
* unsustainable farming and forestry practices (e.g. over-intensive use of soils such as harmful soil practices, mono-cropping and intensive livestock production)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* diffuse contamination (e.g. due to overuse of pesticides, nutrient pollution from excess use of fertilizers, microplastics, air depositions of pollutants)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* local contamination by industrial and waste management activities	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* soil sealing and land take for infrastructure construction (e.g. house building, industrial /commercial buildings, roads and motorways, parking lots, airports)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* other land-use changes such as conversion of natural grasslands, wetlands/peatlands and forests to arable lands	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. To the best of your knowledge, which of the following soil and land degradation processes are the most acute in your country?

	high importance	moderate importance	low importance	not at all important	I don't know / no opinion
* loss of soil organic matter (e.g. loss of stored carbon through erosion, wetland drainage and peat extraction)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* soil pollution (e.g. the accumulation in soil of heavy metals or other chemical pollutants due to industrial activities, waste disposal and unsustainable land management)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* soil erosion (i.e. the removal of the most fertile topsoil by water or wind)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* land take and soil sealing (i.e. covering of the soil surface with materials such as concrete and asphalt, as a result of new buildings, roads, parking places but also other public and private spaces)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* soil compaction (i.e. the result of heavy machinery compressing the soil, preventing air and water to filtrate/accumulate in soil)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* desertification (i.e. land degradation in drylands in which land's ability to support and sustain life is lost due to natural processes or induced by human activities whereby fertile areas become increasingly arid)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* salinization and sodification (i.e. the accumulation of salts in soil that impacts the metabolism of soil organisms and soil fertility)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* acidification (i.e. a process where the soil pH decreases over time)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
*					

loss of soil biodiversity (as a result of the above-mentioned processes or other human-induced factors such as simplified crop rotation, monocultures, intensive application of pesticides and fertilisers and habitat fragmentation)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* loss of ability to withstand floods and landslides (e.g. due to erosion, extreme weather events, or unsustainable land management such as excess sealing, compaction and drainage)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

III. How to address soil and land degradation effectively

7. To the best of your knowledge, are the causes of soil and land degradation sufficiently addressed?

	sufficiently	not enough	not at all	I don't know / no opinion
* in your region	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* in your country	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* at EU level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* at global level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

7a. If you think that the causes of soil and land degradation are not properly addressed, which of the following elements do you think should be addressed better at EU level?

	high importance	moderate importance	low importance	not at all important	I don't know / no opinion
* unsustainable farming and forestry practices (e.g. over-intensive use of soils such as harmful soil practices, mono-cropping and intensive livestock production)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* diffuse contamination (e.g. due to overuse of pesticides, nutrient pollution from excess use of fertilizers, microplastics, air depositions of pollutants)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* local contamination by industrial and waste management activities	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* soil sealing and land take for infrastructure construction (e.g. house building, industrial /commercial buildings, roads and motorways, parking lots, airports)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* other land-use changes such as conversion of natural grasslands, wetlands/peatlands and forests to arable lands	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. [The mission on Soil health and food](#) (one of the missions identified under the EU research programme Horizon Europe) proposed the following eight indicators to assess current soil status and to track changes:

1. Presence of soil pollutants, excess nutrients and salts
2. Soil organic carbon stock
3. Soil structure including soil bulk density and absence of soil sealing and erosion
4. Soil biodiversity
5. Soil nutrients and acidity (pH)
6. Vegetation cover
7. Landscape heterogeneity
8. Forest cover

* Do you think that this set of criteria is appropriate to ascertain soil health?

- Yes, this is a complete set
- The set is appropriate but not complete. I would add other indicators.
- No, this list is not appropriate.

Please, explain which indicators you would add:

200 character(s) maximum

9. What are your views on the following possible actions to be explored under the new EU soil policy framework?

	this is essential	this is important but not essential	this does not necessarily need to be developed at EU level	this is not needed	I don't know / no opinion
* set, at EU level, the criteria that have to be met for soil health to be qualified as 'good'	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* define an EU assessment methodology to monitor the achievement of land degradation neutrality by 2030 (part of the UN Sustainable Development Goal 15)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* improve soil properties monitoring at national and EU level	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* develop guidelines for sustainable management of soil including the safe, sustainable and circular use of excavated soil in the EU	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* introduce binding restoration targets for degraded soils	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* encourage Member States to establish an inventory of contaminated sites	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* encourage Member States to remediate the contaminated sites identified	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* enhance the research and knowledge about soil health and actions to protect it	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* enhance the public awareness (through e.g. school education, soil sustainability labels) and the literacy on the importance of soil health and actions to protect it	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* promote initiatives to reduce soil sealing in the EU and to achieve no net land take by 2050 (objective defined in the Roadmap to a Resource Efficient Europe)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* further support farmers, foresters and other land users to apply sustainable soil management practices through the EU's Common Agricultural Policy and the farm advisory services	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* further support farmers, foresters and other land users to enhance carbon sequestration on soil through dedicated funding	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* strengthen EU leadership on soil and land-related issues in international fora, including through policy dialogue and technical support to partner countries	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. How can the EU better support farmers, foresters and other land users to apply sustainable soil management practices?

	high importance	moderate importance	low importance	not at all important	I don't know / no opinion
* with a clear legal framework	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* through financial incentives	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* through better training and advice	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* through exchanges of best practices among the sectors (e.g. agriculture, environment, climate, etc.)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* through a level playing field in the EU (e.g. same rules on soil for all)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* through developing a certification scheme	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. How can the EU increase the uptake of existing funding (from [the EU's Common Agricultural Policy](#), regional funds, research funds e.g. [Horizon Europe](#), [the LIFE programme](#)) for soil protection and restoration in the EU?

	high importance	moderate importance	low importance	not at all important	I don't know / no opinion
* disseminate better the information on funding possibilities	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* reduce the administrative burden for applications	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* provide assistance in the implementation of the projects	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* foster twinning projects or exchange of best practices between beneficiaries for soil protection and restoration initiatives	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* identify financing opportunities for research and innovation on soil	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. How can the EU steer global action on soil and land protection and restoration?

	high importance	moderate importance	low importance	not at all important	I don't know / no opinion
* mainstream sustainable soil and land management in bilateral and multi-lateral relations and organizations (FAO , UNEP , OECD , WHO , etc.)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* intensify the cooperation and support to the Global Soil Partnership, its European Soil Partnership or other voluntary	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

initiatives such as the “4 per 1000” Initiative					
* aim for better integration of soil in the Rio Conventions (UNFCCC , CBD , UNCCD)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* promote sustainable soil and land management through trade policies and Green Deal diplomacy	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* increase the financial support and development aid for international soil and land protection and restoration projects	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* strive for new international commitments and conventions on soils and land	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

IV. Final remarks

If you wish to add a specific short contribution - within the scope of this questionnaire - please add it here.

1000 character(s) maximum

It is important that advisory systems and regulations for the use of fertilizers etc are adapted to national and, if needed, to regional conditions and are not too rigidly regulated by the EU. In the case when a country or region has already applied effective measures, and can show good results from these, detailed EU-regulation might be contraproductive and thus not contribute to improved soil health as intended.

If you wish also to complement it with a more extended contribution you can also upload a short separate document.

(The maximum file size is 1 MB)

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

Please note that the uploaded document will be published alongside your response to the questionnaire which is the essential input to this open public consultation. The document is an optional complement and serves as additional background reading to better understand your inputs.

Contact

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