

ROADMAP

Roadmaps aim to inform citizens and stakeholders about the Commission's work in order to allow them to provide feedback and to participate effectively in future consultation activities. Citizens and stakeholders are in particular invited to provide views on the Commission's understanding of the problem and possible solutions and to make available any relevant information that they may have.

TITLE OF THE INITIATIVE	New Soil Strategy - healthy soil for a healthy life
LEAD DG – RESPONSIBLE UNIT	DG ENV D1 Land use and management
LIKELY TYPE OF INITIATIVE	Communication
INDICATIVE PLANNING	Q2 2021
ADDITIONAL INFORMATION	The update of the Soil Thematic Strategy was announced in the EU Biodiversity Strategy for 2030. ¹

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A. Context, Problem definition and Subsidiarity Check

Context

Soils are **essential ecosystems that deliver valuable services** such as the provision of food, energy and raw materials, carbon sequestration, water purification and infiltration, nutrient regulation, pest control and recreation. Therefore, soil is **crucial for fighting climate change, protecting human health, safeguarding biodiversity and ecosystems and ensuring food security**. Healthy soils are a **key enabler to achieve the objectives of the European Green Deal** such as climate neutrality, biodiversity restoration, zero pollution, healthy and sustainable food systems and a resilient environment.

The EU Biodiversity Strategy for 2030 announced the update of the 2006 EU Soil Thematic Strategy to **address soil and land degradation** in a comprehensive way and to help achieve **land degradation neutrality by 2030**. The Biodiversity Strategy for 2030 highlights that it is essential to step up efforts to protect soil fertility, reduce erosion and increase soil organic matter. Significant progress is also needed on identifying contaminated sites, restoring degraded soils, defining the conditions for their good ecological status and improving the monitoring of soil quality.

The EU has clear international commitments related to soil:

- Soil and land **lie at the core of most of the Sustainable Development Goals (SDGs)²** of the UN Agenda 2030, but particularly SDG 15.3 to "combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world by 2030".
- In line with the priorities for EU global action and Green Deal diplomacy, there is a call for action related to soil and land at international level under the Convention for Biological Diversity (CBD), the UN Framework Convention on Climate Change (UNFCCC), the UN Convention to Combat Desertification (UNCCD), the Global Soil Partnership (GSP) and more broadly for EU external action and development cooperation.

There have been as well recent calls from **other EU institutions** for action on soil:

- The **European Court of Auditors³** recommended to the Commission to aim at a better understanding of land degradation and desertification in the EU, to assess the need to enhance the EU legal framework for soil, and to step up actions towards delivering EU and international commitments, and particularly

¹ [COM\(2020\) 380 final](#)

² <https://sdgs.un.org/goals>

³ European Court of Auditors (2018) Special report n°33/2018: Combating desertification in the EU: a growing threat in need of more action

land degradation neutrality by 2030.

- The **Council** in its Council conclusions⁴ on the Biodiversity strategy for 2030 supports the Commission in stepping up efforts to better protect soils and soil biodiversity and reaffirms the EU's commitment to reaching land degradation neutrality; it also stresses the need to promptly address desertification and land degradation in the EU and reiterates the will to make progress towards the objective of “zero net land take” by 2050.
- The **European Parliament**⁵ called on the EU and the Member States to make strong commitments towards sustainable food systems, agriculture and forestry, including requirements and strategies for the protection of soils.

Problem the initiative aims to tackle

The European Environment Agency concluded that the **lack of a comprehensive and coherent policy framework to protect land and soil** is a key gap that reduces the effectiveness of the existing incentives and measures and may limit Europe's ability to achieve future objectives.⁶ A new policy framework is needed because the 2006 EU Soil Thematic Strategy is no longer adapted to the policy context of today and the improved scientific knowledge base. If no additional action is taken, there is a high risk that the EU will fail its **Green Deal and international objectives**. In the meantime, land and soil continue to be subject to **severe degradation in the EU**⁷.

- 12.7% of Europe is affected by moderate to high erosion, causing an estimated loss of agricultural production in the EU of €1.25 billion per year.⁸
- Organic carbon stocks in cropland topsoils are declining. The extent of wetland and peatland in the EU has been steadily decreasing with around half of peatlands in the EU now drained and two thirds of European wetlands lost since the beginning of the 20th century. Loss of wetland and peatland has been mostly caused by land conversion for agriculture use.⁹ Also, climate change and unsustainable forest management lead to carbon losses from forest biomass and soils.
- Local pollution is also present in all countries and 14% of an estimated total of 2.8 million potentially polluted sites from industrial activities are expected to require remediation, that is 390 000 sites. By 2018, only some 65 500 of these sites were remediated.^{10 11}
- Diffuse soil contamination by atmospheric depositions, pesticides, antibiotics, excess fertilisers, microplastics, sewage sludge and other waste disposed of on land is widespread.¹²
- Land take and soil sealing continue predominantly at the expense of agricultural land at an annual net land take estimated at 440 km²/year in the period 2012-2018. The target of no net land take by 2050¹³ is unlikely to be met unless annual rates of land take are reduced and land recycling increased.¹⁴
- Intensive land management and land use change negatively impacted in recent decades soil biodiversity such as the species richness of earthworms, springtails and mites.¹⁵
- In Southern, Central and Eastern Europe 25% of soils show high or very high risk of desertification corresponding to about 411 000 km².¹⁶ Large parts of Southern Europe are likely to become desertified by 2050 as a result of climate change and inappropriate agricultural practices.
- Salinisation affects 3.8 million ha in the EU, with severe soil salinity along the coastlines, particularly in the Mediterranean. While naturally saline soils occur, inappropriate irrigation practices, poor drainage

⁴ Council conclusions of 23 October 2020 on biodiversity, the need for urgent action <https://data.consilium.europa.eu/doc/document/ST-11829-2020-INIT/en/pdf>

⁵ European Parliament resolution of 16 January 2020 on the 15th meeting of the Conference of Parties (COP15) to the Convention on Biological Diversity (2019/2824(RSP))

⁶ European Environment Agency (2019) “The European Environment: State and Outlook 2020”

⁷ European Environment Agency (2019) “The European Environment: State and Outlook 2020”

⁸ European Environment Agency (2019) “The European Environment: State and Outlook 2020”

⁹ JRC (2020). Mapping and Assessment of Ecosystems and their Services: The state and trends of ecosystems in the European Union <https://publications.jrc.ec.europa.eu/repository/handle/JRC120383>

¹⁰ JRC (2014). Progress in the management of contaminated sites in Europe.

¹¹ JRC (2018). Status of local soil contamination in Europe.

¹² European Environment Agency (2019) “The European Environment: State and Outlook 2020”

¹³ [COM\(2011\) 571 final](#)

¹⁴ European Environment Agency (2019) “The European Environment: State and Outlook 2020”

¹⁵ European Environment Agency (2019) “The European Environment: State and Outlook 2020”

¹⁶ European Court of Auditors (2018) Special report n°33/2018: Combating desertification in the EU: a growing threat in need of more action

conditions or the use of salt for de-icing roads induce anthropogenic salinisation.¹⁷

The underlying drivers of soil degradation are in general not projected to change favourably compared to current status, so the functionality of soils and land will come even under more pressure. The competition and claims on this declining, finite and degrading natural resource will only increase in the future without additional policy measures.

Basis for EU intervention (legal basis and subsidiarity check)

EU soil policy action is based on **Article 191 of the Treaty** on the Functioning of the EU (TFEU), which requires Union policy to aim at preserving, protecting and improving the quality of the environment, protecting human health, a prudent and rational utilisation of natural resources, promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change. EU policy action on soil protection is justified due to:

- 1) the transboundary impacts of soil degradation, 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,
- 2) the absence of a level playing field for economic operators subject to very different national soil protection regimes, leading to a distortion of the internal market,
- 3) the risk that the EU and its Member States will fail to fulfil international and European commitments in the field of environment, sustainable development and climate.

B. What does the initiative aim to achieve and how

The new Soil Strategy will provide the overarching framework and the concrete pathway towards achieving the following objectives:

- Step up efforts to protect soil fertility and reduce soil erosion
- Increase soil organic matter and restore carbon-rich ecosystems
- Protect and enhance soil biodiversity
- Reduce the rate of land take, urban sprawl and sealing to achieve no net land take by 2050
- Progress in identifying and remediating contaminated sites and address diffuse contamination
- Address the growing threat of desertification
- Achieve land degradation neutrality by 2030

By:

- Promoting the adoption of sustainable soil management practices
- Setting out actions to restore degraded soils and secure sufficient EU funding to this end
- Improving the monitoring of soil quality
- Adapting and improving the relevant EU policy framework in line with the European Green Deal objectives on climate neutrality, zero pollution, sustainable food systems and resilient ecosystems
- Developing knowledge and research
- Accelerating the transition towards sustainable soil management and the necessary behavioural change
- Steering EU global action on soil under the Rio Conventions, EU external action and development cooperation.

The strategy will **consolidate, complement and steer action in the different policy areas** that affect and depend on soil (such as pollution prevention, agriculture, research) and guide the implementation of sustainable soil and land management practices. It will cover all key horizontal aspects from funding instruments to developing knowledge, research, communication and international cooperation. This will be done in close coordination and complementarity with other European Green Deal initiatives, including the upcoming Zero Pollution Action Plan, and other initiatives resulting from the EU Biodiversity Strategy for 2030 and the Farm to Fork Strategy. This also includes the legally binding EU nature restoration targets that the Commission will propose in 2021 and which should contribute to the achievement of the objectives of the new Soil Strategy and the restoration of degraded soils.

C. Better regulation

¹⁷ FAO and ITPS (2015). Status of the World's Soil Resources (SWSR)

Consultation of citizens and stakeholders

The update of the 2006 Soil Thematic Strategy will be supported by a broad consultation of stakeholders, including Member States, businesses, land managers, farm advisors, urban planners, rural and landscape developers, agro-, food- and beverage industry, research and academia, non-governmental organisations (NGOs) and other organisations dealing with environmental and nature protection, and general public. The consultation activities will include a **public consultation**, consultation of Member States through the **EU expert group on soil protection**, and dedicated outreach activities (e.g. campaign on social media, focused stakeholder meetings, etc.).

The public consultation will be launched in autumn 2020 with a duration of 13 weeks. It will be available in all 24 official EU languages on the Commission's "Have your say" website. A series of dedicated discussions in concerned experts groups and committees consisting of experts from EU Member States, member countries of the European Environment Agency, etc. will be organised from October 2020 to early spring 2021.

Evidence base and data collection

The new Soil Strategy builds on the **substantial knowledge base** compiled at EU and international level, notably by the European Environment Agency¹⁸ (e.g. assessments on soil condition) and the Joint Research Centre (the European Soil Data Centre and LUCAS soil¹⁹ among others), but also the experiences gained since the adoption in 2006 of the current strategy. The **EU expert group on soil protection** has discussed and reflected with the Commission since 2015 how soil quality issues could be addressed at EU level.²⁰ The results of this exchange will be taken into account in the new strategy. The new strategy will also build on the 2012 report on the implementation of the current strategy and ongoing activities²¹ and on a number of specific projects and studies aimed at further developing EU soil and land policy action.

The Strategy will not require an impact assessment as such, but for any future binding targets, revisions or new proposals of EU legislation, separate and dedicated impact assessments will be developed, including for the proposal for legally binding nature restoration targets to restore degraded ecosystems. The impact assessment for the restoration targets in particular will look at the possibility of an EU-wide methodology to map, assess and achieve good condition of ecosystems, which include soils.

An improved common EU policy framework and strategy with clear objectives and plan of action will increase legal certainty for European companies and citizens, and provide clarity on the joint principles and vision for soil protection and restoration in the EU. Investments in the **remediation of polluted sites, prevention of soil degradation, sustainable soil and land management practices** and **land restoration** will contribute to the post-pandemic recovery and EU's resilience, and provide a substantial return on investment as the cost of inaction outweighs the cost of action by a factor of 6.²²

¹⁸ <https://www.eea.europa.eu/themes/soil>

¹⁹ <https://esdac.jrc.ec.europa.eu/projects/lucas>

²⁰ <https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3336>

²¹ [COM\(2012\) 046 final](#)

²² Nkonya et al. (2016). Economics of Land Degradation and Improvement - A Global Assessment for Sustainable Development