EBA POSITION PAPER

Soil Monitoring Law: Restoring European Soils by Applying Digestate

Healthy soils contribute to providing essential ecosystem services such as food and biomass production, clean water, nutrient cycling, carbon storage and habitat for biodiversity. Yet, according to the current data available, 60 to 70% of soils are in unhealthy condition in Europe and soil degradation is worsening due to climate change and unsustainable soil management. This major problem leads to risks for the environment, economy and society, including risks for food security, climate resilience, human health and biodiversity. The costs of soil degradation are estimated to exceed 50 billion euros per year[1].

To tackle this challenge, the European Commission tabled a **proposal for a Soil Monitoring Law** as part of a set of measures on "Ensuring resilient and sustainable use of EU's natural resources"[2]. The Directive proposal aims to achieve the goal set in the EU Soil Strategy[3]: **ensuring that all soils are in healthy condition by 2050**.

The European Biogas Association (EBA) welcomes the proposal which represents a first necessary step towards protecting vital ecosystem services and achieving prosperity throughout Europe. The proposal provides a harmonised definition of soil health, sets a comprehensive monitoring and assessment framework of soil health and supports sustainable soil management as well as remediation of contaminated sites. The setting-up of a soil health certification, the inclusion of anaerobic degradation/digestion as a remediation technique for contaminated sites and the recognition of the prioritization of "circular solutions that enrich the organic content" as a sustainable soil management principle are also positive developments.

In line with this principle, the application of digestate[4] on agricultural soils is a sustainable soil management practice which must be further implemented on all managed soils. By contributing to restore several aspects of soil degradation, digestate application can support various soil ecosystem services such as ensuring crop yield and biomass production, providing a habitat for biodiversity, enabling greater carbon sequestration in the soil and helping to control erosion and retain water.

To improve the effectiveness of the Soil Monitoring Law, EBA proposes two main recommendations to the European Parliament and Member States:

1. **Introduce binding targets for soil health (Article 1) and speed up the implementation of mandatory regeneration practices (Article 10).**
2. **Provide concrete examples of sustainable soil management and regeneration practices including digestate application (Article 10 and Annex III) and support them in other legislations such as the Common Agriculture Policy.**

1. Introducing binding targets for soil health and speed up the implementation of mandatory regeneration practices

The proposal for a directive by the European Commission is lacking provisions to pave the way towards ensuring that all soils are in healthy condition by 2050. While the Impact Assessment accompanying the proposal describes extensively the

[1] Commission Staff Working Document, Impact Assessment Report accompanying the proposal for a Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law), SWD(2023) 417 final, Part 1/5, p. 5.
[2] Communication from the Commission, Ensuring resilient and sustainable use of EU's natural resources, COM(2023) 410 final.
[3] Communication from the Commission, EU Soil Strategy for 2030 – Reaping the benefits of healthy soils for people, food, nature and climate, COM(2021) 699 final.
[4] Digestate is one of the co-products of biogas production.

significant negative impacts of soil degradation in Europe[5], **the proposal does not provide any roadmap, intermediary binding targets or mandatory national plans to ensure that the soil health objective is reached in due time**. The Commission is favouring a "staged approach" which aims to provide Member States with time to first set the mechanisms to assess the condition of soils and then decide on the regeneration measures once the conclusions are available. According to article 10 of the proposal, Member States would have to start defining sustainable soil management (SSM) and regeneration practices 4 years after the entry into force of the Directive.

Firstly, **the current obligation consists solely in defining the practices, not implementing them**. Except from the obligation to remediate contaminated sites (which only concerns one aspect of soil degradation i.e. soil contamination), there is no obligation for Member States to restore soil health in the proposal. Soil restoration is the only building block of the proposal where the European Commission did not decide to implement the preferred option according to the impact assessment[6]. Moreover, the proposal did not set any obligation to draw up national soil health plans so it is unclear how the competent authorities will demonstrate compliance and implement market surveillance.

Secondly, **the potential timeline of implementation of the previously defined SSM and regeneration is not coherent with the 2050 objective**, nor the timeline for the remediation of contaminated sites. Indeed, Member States could be expected to have at least 50% of their soils in healthy condition by 2037 which is half-way towards the objective of 2050. Nevertheless, if Member States were to start implementing the SSM and regenerative practices four years after starting to define them (i.e. by 2033), they would have only four years of implementation of these practices to evolve from 30/40% of healthy soils to 50% of healthy soils.

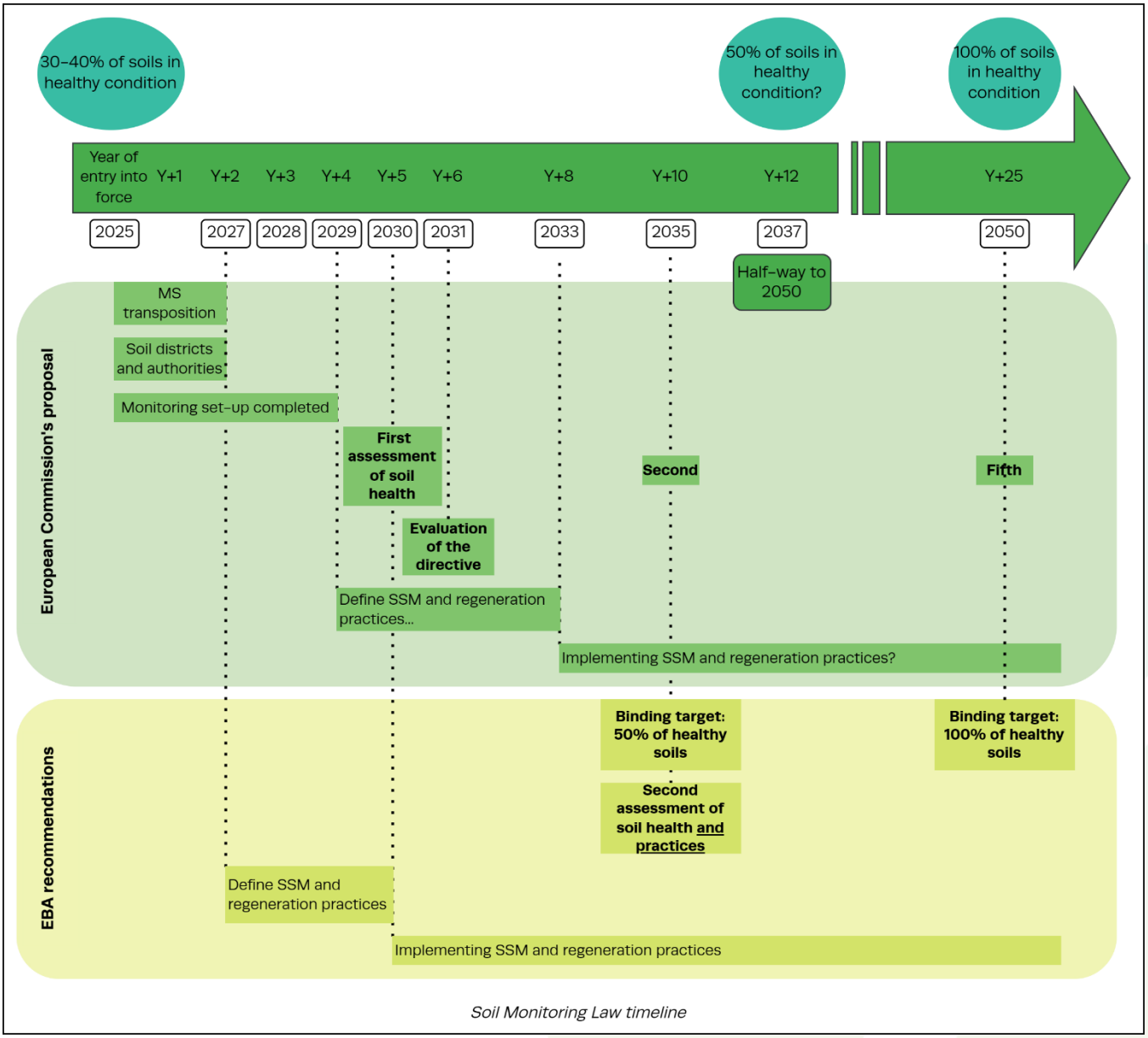
To ensure that the 2050 objective is achieved, it is necessary to increase the ambition of the Directive. The European Biogas Association proposes several recommendations:

- **Include binding (intermediary) targets (Article 1)**. Member States must have the obligation to achieve the following soil health targets at national level: ensure that 50% of soils are in healthy condition 10 years after the entry into force of the Directive (i.e. by 2035 which corresponds to the second assessment of the Directive) and ensure that all soils are in healthy condition by 2050.
- **Make soil health restoration mandatory for Member States (Article 10).** It must also be clarified that regeneration practices, similarly to SSM practices, have to be compliant with the sustainable soil management principles listed in Annex III.
- **Accelerate the timeline of the definition and implementation of the SSM and regeneration practices (Article 10).** To enable Member States to reach the target of 50% of soils in healthy condition by 2035, Member states should start defining the practices 2 years after the entry into force of the Directive and their implementation must start 5 years after the entry into force of the Directive (i.e. by 2030).
- **Assess the effectiveness of these practices at least every 5 years (Article 10).** A timeline for the assessment of these practices by Member States must be strictly included to ensure that the practices can be adjusted in order to reach the binding target by 2035 and 2050.

[5] Commission Staff Working Document, Impact Assessment Report accompanying the proposal for a Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law), SWD(2023) 417 final, Part 3/5, p. 224.

[6] Commission Staff Working Document, Impact Assessment Report accompanying the proposal for a Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law), SWD(2023) 417 final, Part 3/5, p. 629.

2. Providing concrete examples of SSM and regeneration practices including digestate application and supporting them in other legislations such as the CAP



Soil Monitoring Law timeline

In the proposal for a Soil Monitoring Law, the European Commission only provided a set of very general sustainable soil management practices. Nevertheless, research and innovation in the field of agronomy is dynamic and some innovative practices can be very valuable to address soil degradation while helping to tackle other EU challenges such as climate neutrality or food security. Even if providing a list of general principles is important to ensure that each member state may implement the most appropriate SSM practices taking into consideration the specific local, climatic, and social-economic conditions, as well as land uses and soil types, **these principles should be associated with a solid guidance listing examples of practices**. Indeed, concrete knowledge is needed to inform Member States about the best practices to implement depending on the specific conditions mentioned above. This guidance is also key taking into consideration that Member States will have to comply with a tight schedule for implementation, even tighter if the amendments suggested above were

to be included. It will help to limit the administrative burden and adjustment costs of Member States, landowners and land managers. In general, European institutions and Member States will need to provide financial support, advice and training to farmers, especially if the implementation of regeneration practices is associated with higher investment costs such as for machinery renewal,

The application of high-quality digestate to the soil is one example of an innovative sustainable soil management practice which is not very documented, whose potential is severely untapped and therefore must be formally promoted in the Soil Monitoring Law. As detailed in our previous paper *Recommendations on Soil Health Law*, **digestate application to the soil can contribute to restore one essential aspect of soil degradation addressed in Annex I of the proposal which is the loss of soil organic carbon**. Indeed, around 40 to 50% of digestate contains stable organic matter which is particularly recalcitrant to biodegradation, meaning it has a lower organic matter degradation rate after field application. This stable organic matter in the digestate contains stable organic carbon which, unlike synthetic fertilisers, contributes to restoring or increasing soil organic carbon[7] when applied to the soil. The stable organic matter in the digestate also contains strong humus precursors such as lignin which lead digestate to build up humus in the topsoil. This stable organic matter part can be concentrated in the solid fraction of digestate[8] and then further valorised as a carbon rich fraction with the additional benefit of creating humus. The application of digestate is therefore a sustainable soil management practice complying with the SSM principle "e." of Annex III: *"when fertilization is applied, ensure adaptation to the needs of the plant and trees at the given location and in the given period, and to the condition of soil and **prioritize circular solutions that enrich the organic content**"*. Because of this specific property, digestate application can also have a positive impact on other aspects of soil degradation such as soil erosion, the reduction of soil capacity to retain water and the loss of soil biodiversity.

To ensure that the 2050 objective is achieved, it is necessary to go a step further to foster the implementation of the SSM and regeneration practices. EBA proposes targeted recommendations to improve the proposal:

- **Request the publication by the European Commission of a specific guidance with examples of effective SSM practices and regeneration practices (Article 10)**. It is essential that Member States have access to better information on all the innovative practices that they could implement to sustainably manage and regenerate soils. This guidance will be key for Member States to be able to adapt to the accelerated timeline proposed below. A dedicated expert group could be set up to draft this guidance or, alternatively, it could be designed by the Commission Expert Group on the implementation of the EU Soil Strategy for 2030.
- **Include examples of practices able to achieve each of the SSM principles (Annex III).** The SSM principle "e." related to the prioritization of circular fertilising products enriching the organic content must specifically refer to the use of compost and digestate.
- **Support the implementation of SSM and regeneration practices in other EU legislations and remove any remaining regulatory barrier for the uptake of these practices**. The Common Agricultural Policy must for instance further promote digestate application as a "good agricultural and environmental condition" (GAEC) or an eco-scheme. The restriction on the use of processed manure included in the Nitrate directive must also be revised in accordance with the latest scientific evidence on the use of digestate.

[7] Soil organic carbon (SOC) refers only to the carbon component of organic compounds found in soil organic matter (SOM).

[8] Before being applied to the soil, digestate is often mechanically separated between a liquid fraction, richer in nitrogen and potassium and a solid fraction, richer in organic matter and phosphorus.

About EBA

The European Biogas Association is the voice of renewable gas in Europe since 2009. EBA advocates the recognition of biomethane and other renewable gases as sustainable, on demand and flexible energy sources that provide multiple knock-on socio-economic and environmental benefits. Supported by its members, EBA is committed to work with European institutions, industry, agricultural partners, NGOs and academia to develop policies which can enable the large-scale deployment of renewable gases and organic fertilisers throughout Europe, supported by transparent, well-established sustainability certification bodies to ensure that sustainability remains at the core of the industry. The association counts today on a well-established network of over 200 national organisations, scientific institutes, and companies from Europe and beyond.
EBA is a partner in the 4 per 1000 initiative and a signatory of the "Save Organics in Soil" manifesto and the Mission soil manifesto.

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