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MEETING DOCUMENT

From:	General Secretariat of the Council
To:	Working Party on the Environment
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Subject:	Soil Monitoring Directive: WPE on 21 February 2025 – Presidency steering note

With a view to the WPE on 21 February 2025 delegations will find attached the Presidency steering note.

PRESIDENCY STEERING NOTE

Working Party on the Environment

21 February 2025

Soil Monitoring and Resilience Directive (Soil Monitoring Law) - SML

INTRODUCTION

Considerable progress was made at technical level and during two political dialogues held during the PRES HU. The Parliament made substantial concessions on several of the Council's proposals, including on the concept on the monitoring and assessment framework and the trigger and target values for individual descriptors. This was important to maintain the structure of the Annexes as in the Council's general approach and preserve the harmonized but fully flexible sampling design for the Member States. Furthermore, the flexibility of the risk-based approach in the Council's position on contaminated sites has been largely maintained.

Despite the effort made by HU PRES and many points of convergence identified during the 2nd political dialogue, which took place on 12 December 2024, a political agreement could not be concluded. The HU PRES was not in a position to offer concessions satisfactory for the EP on a remaining number of points, as it would largely overstep the mandate agreed at Coreper on 11 December 2024, in particular as regards the land take and sustainable soil management package. The PRES has therefore continued the discussions at technical level, bearing in mind the sensitivity of these issues for both institutions. Five ITMs have taken place in 2025 so far, in addition to the ones held in 2024 (9 ITMs).

While we are mindful of the principles agreed in the general approach, our biggest challenge now is to preserve the momentum towards securing a political agreement on this important legislation, necessary to put the EU on a pathway to healthy soils by 2050. We are therefore asking the Member States to provide us with the necessary flexibility for the next, and hopefully final trilogue, to be held on 9 of April.

Issues for discussion:

This steering note includes an update on the discussions at technical level, possible solutions and clarifications on these salient points.

We propose organizing the meeting in the following four rounds of discussions:

- 1) The role of LUCAS in the monitoring architecture (Articles 6-9, row 130c, rows 142a-142d);
- 2) List of contaminants and additional descriptors on soil biodiversity (new Article 7a, row 139a, recital 48b, row 58b)
- 3) Issues and compromises pertaining to:
 - a) Sustainable Soil Management principles and toolbox (Article 10, rows 172-185a, Annex III, rows 328-342, new Article 10a, rows 185b-185e);
 - b) Land take mitigation principles and addressing mining sector concerns (Article 11, Article 3(1), Article 3(17), Article 8(2) 2nd subparagraph, recitals 30ca (new) and 30e, rows 186-192b, 78, 94, 146a, 40ca (new), 40e, Annex I Part D);
- 4) Horizontal issues:
 - a) Financing (Article 17, rows 237-238f);
 - b) Support of the Commission (new Article 23a, rows 283a-283u);
 - c) Involvement of the public in Chapter IV - Access to justice (Article 22, rows 272-275).

1. The role of LUCAS in the monitoring architecture (Articles 6-9, row 130c, rows 142a-142d);

In the course of the technical discussions the European Parliament (EP) agreed to abandon the idea of 5 ecological status classes and 3-tier system in exchange of a broader reference to the LUCAS soil survey, to make sure a harmonized and reliable monitoring system is put in place.

The SML envisages that the current approach of the LUCAS soil survey will be adapted to the new requirements for monitoring and assessment.

To try to find solutions that meet the expectations of both co-legislators, the European Commission (EC) proposed different options related to the coverage of the LUCAS soil survey, quality assurance and comparability of data and archiving. These options are summarized below and described in detail in Annex I to the steering note.

a) Coverage of the LUCAS soil survey

Option 1 – The LUCAS soil survey would be mandatory only for a transitional period in the first measurement cycle. This is to guarantee a successful transition to the new system and comparability of data, since LUCAS is currently the only monitoring system common for all the MS.

Option 2 - all soil samples are taken by the MS themselves but a certain part would be analysed by LUCAS in all future monitoring cycles.

The options are described in detail in Annex I part A to the steering note.

The EP expressed its openness to both options with some preference for option 2 to address their concerns about data comparability. In case option 2 would be accepted, the EP could show more flexibility in parts b) and c).

b) Quality assurance and comparability of data

Option 1 – In cases where a Member State uses a non-CEN/ISO methodology, LUCAS carries out an additional analysis of some samples, with the standard methodology of Annex II SML. This helps to further refine the transfer functions.

Option 2 – EC adopts implementing acts to establish a detailed sampling protocol and to further improve the harmonisation and comparability of data.

The options are described in detail in Annex I part B to the steering note.

The EP argues that differences in the sampling and analytical methods may lead to different results and lower comparability of data. The EP insists to introduce more measures to secure the comparability of data as compensation for the flexibility offered to Member States regarding the methods used to test individual descriptors and the admission of alternative methods (with transfer functions). At the same time the EP understands that the MS need to have certain flexibilities and avoid excessive costs. The EP expressed readiness to build on option 1 or combine it with option 2.

c) Archiving

Option 1 – a certain percentage of the samples taken and analysed by the MS are mandatorily sent for archiving by LUCAS.

Option 2 - mandatory archiving by the MS of a certain minimum percentage of the samples that were taken and analysed by the MS (the EP requires a common condition to be set); the percentage of samples should be representative at EU level (expected

by the EC to be around 20000, i.e. 20% of MS samples); the modalities of the survey will be agreed in the written agreement referred to in Article 8(1a), on the basis of the EC «initial starting sample» in art 8(1) of the general approach.

The options are described in detail in Annex I part C to the steering note.

The EP believes that it is important to build archives that could be usable for the purpose of future research and analysis. The EP argues that the MS examine only certain descriptors, and therefore it should be possible for scientists to expand the scope of the measurements. Moreover, methodologies for some emerging contaminants don't exist at the moment but may be developed in the future. Archives will then make it possible to check the levels of such contaminants in the future. A single archive at European level is a preferred option for the EP as it would enable to store all the samples in the same location and under the same conditions and increase availability for researchers. It has been proposed that the agreements between the EC and MS on LUCAS could contain provisions related to the cost of transport.

Question 1: The Member States are invited to indicate which of the options they couldn't accept.

2. List of contaminants and additional descriptors on soil biodiversity (new Article 7a, row 139a, recital 48b, row 58b)

a) Additional list of soil contaminants subject to targeted sampling (new Article 7a, row 139a, recital 48b, row 58b)

Proper monitoring and assessment of soil contaminants, such as PFAS and pesticides in soil, remains a key issue for the EP. During the technical discussions the EP indicated its readiness to move from its initial position (3-tier system, including monitoring and analysis of a broad range of substances in all samples in tier 1) and to include the additional indicators in Part C of Annex I and only for a limited number of samples.

The following options, taking into account the feasibility aspect, have been discussed so far. To be noted that both options would leave untouched the indicative watchlist for soil contaminants related to part B of Annex I, as proposed by the Council.

Option 1 – an *indicative* list of soil contaminants (PFAS and pesticides...) to be monitored in a targeted part of the samples under Part C of Annex I; the list needs to be taken into account, but the choice of the contaminants from the list is up to the MS; a selection of PFAS and pesticides shall be monitored by the MS.

Option 2 – a *mandatory* list of soil contaminants (PFAS and pesticides) for Part C Annex I; all contaminants in the list need to be monitored on a limited number of samples.

The options are described in detail in Annex II to the steering note.

Both options maintain mandatory measurements of total PFAS and a selection of PFAS (there is a discussion whether these should already be selected) and a selection of pesticides on a reduced number of samples.

As regards the measurement of pesticides, the EP could accept to limit the scope, but insists on a minimum number (e.g. 15). According to the EP the selection should be based on the toxicity of the pesticides as well their relevance for the MS, taking into account the actual usage and sales of the pesticides in the given MS, their mobility and persistence.

It should be noted that the Joint Research Centre (JRC) carried out preliminary analyses, which showed that around 400 pesticides were used in the EU, of which around 100 were identified as the most problematic¹. Furthermore, the Commission plans to carry out the first EU assessment of diffuse PFAS contamination in soil in 2025 which would be useful also to inform future national assessments. It should be noted that the additional list of contaminants concerns inter alia substances on which there is not enough knowledge to set threshold and target values. As a result of the negotiations so far, the EP did not oppose removing the microplastics test from the proposed new article 7a and moving it to a recital.

Question 2: The Member States are invited to indicate which of the options they couldn't accept.

b) Additional descriptors on soil biodiversity (Annex I, part C of the SML).

¹ The relevant JRC report is available here: <https://publications.jrc.ec.europa.eu/repository/handle/JRC133940>.

During the technical discussions as well as at the trilogue the EP made it clear that at least one common mandatory soil biodiversity descriptor needs to be included in Annex I part C of the final text of the Directive.

So far two options have been discussed at technical level:

Option 1 - a descriptor based on abundance of soil organisms such as nematodes / earthworms / collembola / springtails.

Option 2 - microbiota DNA metabarcoding regarding the diversity of fungi, bacteria, protists and plant pathogens.

The EP expressed its readiness to discuss any option related to an additional soil biodiversity descriptor.

Question 3: Since option 1 has already been discarded as not mature and not feasible in the previous discussions, MS are requested to indicate their flexibility regarding option 2.

3. Issues and consideration of compromises pertaining to:

a) Sustainable Soil Management principles and toolbox (Article 10, rows 172-185a, Annex III, rows 328-342, new Article 10a, rows 185b-185e)

The EP maintains its position on Article 10 and insists the directive should not provide basis for imposition of new obligations in respect of sustainable soil management, especially on agricultural sector, without ensuring appropriate financial support. The EP indicated it cannot accept reference to sustainable soil management or the list in Annex III (even if indicative). In order to address the EP's concerns, a new concept and definition of „soil resilience” and a new wording of Article 10 and recital 37a have been proposed by the Commission.

The suggested changes include:

- replacement of the "sustainable soil management" concept with "soil resilience", with a new definition (the reference to sustainable soil management is left in just one recital),
- clarification that the provision does not impose any additional obligations on land managers², but only ensures that they are provided with support, including information and advice,
- deletion of Annex III.

It should be noted that:

- the provision ensuring the link between soil health data from monitoring and other existing EU policies is not deleted, but moved to Article 9,
- to counterbalance the deletion of Annex III, and to provide support to the MS, it has been proposed to add a new provision in Article 23a letter (k), on EC support for soil resilience by providing and regularly updating a repository of knowledge on soil resilience containing information on soil management practices; the repository will replace the toolbox in Article 10a.

The compromise proposal, indicated by the EP as acceptable with minor changes, is described in detail in Annex III to the steering note.

Question 4: Could you accept the compromise proposal on soil resilience, including the definition?

² Note the insertion in recital 37a that preserves the possibility for the national authorities to impose obligations based on other EU rules.

Additional clarification on costs for landowners

It remains crucial for the EP to ensure that land managers would not be charged with the costs of monitoring, and therefore it insists to clarify that in a recital. At the same time the EP agrees that it should not contradict the Polluter Pays Principle and that land managers that caused contamination should be obliged to bear the costs of remediation. Therefore, the recital should make it clear that it does not refer to contaminated sites but only to the direct costs of measurements of descriptors. It should be noted that in any event the intention was that the costs are to be borne by the authorities, but the EP insists on a clear text given that this aspect was repeatedly raised in its debates.

The following recital has been proposed:

“Without prejudice to Member States competence on taxation, the provisions of this Directive concerning soil health monitoring should not be understood as creating, per se, any obligations or financial burden on landowners and land managers other than Member States and the designated competent authorities.”

Question 5: Could you accept the new recital proposed above? If not, can you suggest an alternative solution to address the concern of the EP?

b) Land take mitigation principles and addressing mining sector concerns (Article 11, Article 3(1), Article 3(17), Article 8(2) 2nd subparagraph, recitals 30ca (new) and 30e, rows 186-192b, 78, 94, 146a, 40ca (new), 40e, Annex I Part D);

During the discussions with the EP the PRES has defended the general approach and insisted that no substantial changes in the text can be accepted by the Council. During the trilogue and the technical discussions the EP has moved from its initial position and showed openness to move some of its amendments to recitals, notably as regards compensation and brownfields (see Annex IV to the steering note).

Nevertheless, while agreeing to the Council's proposal to focus on the most visible aspects of land take, i.e. soil sealing and soil destruction, the EP insists on maintaining

a definition of land take in Article 3(1), point 17 (Row 94): 'land take' means the conversion of natural and seminatural land into artificial land.'

As regards the concerns of the mining sector, the EP indicated it could consider to drop its proposal to exclude raw materials from the definition of soils if sufficient guarantees for industry were included in the text. In the Council GA, concerns were addressed by adding dedicated explanations in recitals and changing the wording of Article 11. In order to bring further clarifications, additional changes are suggested in Annex IV to this steering note, in line with the mandate agreed by Coreper ahead of the second trilogue. In a nutshell, these changes are the following:

- Change the term soil destruction to soil removal
- Clarify that sealed and removed soil are not subject to the soil health monitoring indicators of part A, B, C, but only subject to the indicators of Annex I, part D
- Clarify in a recital that the SML does not require a new permitting procedure and would not unduly delay permitting procedures.

Please also consider the proposal on an additional mandatory indicator in part D. The proposal of the EP is described in detail in Annex IV to the steering note.

Question 6: Which of the proposed amendments of the EP you couldn't accept?

4. Horizontal issues:

a) Financing (Article 17, rows 237-238f)

The EP is willing to drop its amendments in row 237, in view of the MS autonomy on financing, and to delete rows 238b, 238d, 238e and 238f. In addition, the EP can accept the deletion of the reference to LUCAS in row 238a. In return, it would like to maintain its proposal in row 238c. The PRES insisted during the technical discussion that it could not accept the text that is too prescriptive in terms of possible allocation of national financing. The EP agreed to accommodate the Council's concerns by additional changes as follows:

Row 237: Union and Member States' financing

Row 238a: *The Commission shall assess any gap between the available Union funding and funding needs for supporting Member States in the implementation of this Directive, paying specific attention to environmental monitoring needs, including LUCAS soil and possible future technical development.*

238c *When implementing this Directive, the Commission and Member States shall make use of financial resources from ~~all~~ appropriate funds and innovative financing mechanisms and promote, in collaboration with the European Investment Bank, the mobilisation of private capital for actions necessary to achieve the objectives of this Directive.*

Question 7: Can you accept the proposed compromise on Article 17?

b) Support of the Commission (new Article 23a, rows 283a-283u)

For the EP it is important that the directive would take into account the cooperation not only between the EC and the MS, but also among individual MS, especially when it comes to the establishment of target and trigger values, and with external stakeholders. In this regard the EP would like to consider linking row 283b (on Article 23a added in the GA) with rows 111f, 111g on the cooperation between soil districts, row 132a on capacity building and sharing of monitoring experience; row 132d on the archiving of soil samples; and row 294c – where the EP added a new provision to strengthen the cooperation between the Member States and external stakeholders. The EP is currently working on an additional wording in art. 23 on strengthened cooperation between the MS.

Question 8: Is this solution acceptable, pending the wording suggestion by the EP?

c) Involvement of the public: Chapter IV Article 22 - Access to justice (rows 272- 275)

The EP wants to maintain broad involvement of the public with regard to contaminated sites. Some concessions, mainly on the concept of “public concerned” in art. 3 and art. 12 have been made already by the EP. The EP could agree to focus only on point source contamination in chapter IV (in exchange of a list of contaminants in Annex I Part C), and to drop the EU-wide maximum thresholds for tolerable risk.

However, the EP maintains its view that, as regards Article 22, NGOs requesting access to justice should not be required to prove sufficient interest. To ensure this, the EP seeks the Council's acceptance for the proposed changes in Article 22 "Access to justice", based on the solution agreed by the co-legislators in the Ambient Air Quality Directive (AAQD). Since the EP suggestion does not, in substance, go beyond what has already been agreed recently in the framework of other EU environmental legislation, the Presidency seeks the support of the MS for this modification.

Question 9: Could you accept the EP proposed addition regarding NGOs access to justice?

ANNEX I

Monitoring system based on LUCAS to ensure comparability and quality of data

PART A - Coverage of the LUCAS soil survey

Since 2009, the Commission organised the LUCAS soil survey with a periodicity of 3 years (2009-2012-2015-2018) or 4 years (2018-2022). In 2022, the LUCAS surveyors took soil samples following a harmonised protocol on 41.000 points in all MS of the EU. All LUCAS soil samples are analysed with standardised methods in one single laboratory under strict quality control. For these reasons, LUCAS soil is the largest regular pan-European harmonised soil survey. The financial statement currently foresees that the budget for the LUCAS soil survey remains stable.

The European Parliament sees the unique nature of the current LUCAS soil survey (1 sampling protocol, 1 laboratory, all Member States) as an important advantage to ensure comparability of data, also in the future. Because the LUCAS soil survey, under the provisions of the Soil Monitoring Law, would become subject to an expression of needs for support and a written agreement from Member States, there is a risk that in the future the LUCAS soil survey will no longer cover all EU Member States. The following two options aim to respond to the concerns of the Parliament.

Option 1

This option maintains the text of the General Approach but introduces one transitory LUCAS soil survey in all Member States in the first monitoring cycle according to the current procedure. LUCAS soil surveyors would take soil samples in all Member States with analysis of the samples in the LUCAS laboratory. This option has the advantage that it responds to the constraints of the tight timeframe for the first monitoring cycle and the need to plan and procure timely. For this reason the transitory LUCAS soil survey would not be able to take account of the needs expressed by Member States. The LUCAS sampling points would be determined by the Commission and communicated to the Member States so that this information can be integrated into the national sampling grid (as they consider fit). For the second and next monitoring cycles, the LUCAS soil survey can be adjusted and tailored to the national needs as per the text agreed by the legislators. The organisation of such transitory LUCAS soil survey would allow a smooth transition to the new system to better fit the future LUCAS and national monitoring systems, and would also function as a safety net in case there are difficulties with the national monitoring in the first cycle.

Text proposal for option 1:

- Add a new article paragraph 8(1b) in GA to introduce the transitional LUCAS soil survey as follows:
 - **“By way of derogation from paragraphs 8(1a), for the first soil monitoring cycle, the Commission shall carry out soil measurements in all Member States without requesting the agreement of the Member States. The sampling points shall be determined by the Commission and communicated to the Member States. Member States shall facilitate the in-situ soil sampling carried out by the Commission.”**
- Modify paragraph 8(4) GA as follows:
 - Delete “in case of support by the Commission”.
- Modify article 6(3), point c and add reference to new paragraph 8(1b) as follows:
 - **“the soil measurements to be carried out by Member States and, if any, by the Commission in accordance with Article 8(1b), 8(2) and 8(2a)”**

Option 2

This option makes the LUCAS soil survey mandatory in all MS, also in the future. However, LUCAS surveyors would no longer take soil samples anymore in the Member States, so Commission surveyors would no longer require access to land. Instead, LUCAS would only analyse in the laboratory a certain part (to be agreed by the legislators) of soil samples taken by Member States. The mandatory cooperation between LUCAS and the Member States (e.g. which points, planning, transport, logistics, etc.) would still be arranged through a written agreement.

Text proposal for option 2:

- Delete article 8(1a) GA.
- Modify article 8(2) (COM proposal) as follows:

“2. Member States shall take soil samples at the sampling points referred to in paragraph 1.

Member States and the Commission shall carry out soil measurements by taking on the soil samples taken by the Member States at the sampling points referred to in paragraph 1 and collect, process and analyse data as relevant in order to determine the following:

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[...]

The Commission shall carry out soil measurements on at least [x%] and at most [y%] of the soil samples. Member States shall ensure that the soil samples on which the Commission shall carry out soil measurements are sent to the Commission in a timely manner preserving their integrity. The Commission shall communicate the results of its measurements to the Member States.

The practical organization between the Commission and the competent authority of the Member State is covered by a written agreement.”

- Remove in all relevant parts of the GA the word “in case of support from the Commission”.

PART B - Quality assurance and comparability of data

The Soil Monitoring Law aims to harmonise soil monitoring by measuring as much as possible the same descriptors with the same statistical, sampling and laboratory methodologies. The General Approach in article 8(3a) further improved the quality assurance of the laboratories by ensuring the application of quality standards and quality management practices, and the participation in proficiency tests and the analysis of reference materials when available.

In addition, the Commission together with standardisation bodies can also further develop and organise new proficiency or ring testing programmes for reference methodologies of annex II to ensure the quality of the laboratory analysis.

Since, the GA still leaves some flexibility to Member States as regards the selection of certain descriptors, the application of statistical and analytical methodologies and certain important aspects of the sampling protocol have not been defined in the legislation (e.g. the use of spade or gauge auger, the season or timing of the sampling, the approach in wet conditions, the preparation, preservation and transport of the sample, etc.), the European Parliament maintains concerns over the quality assurance and the comparability of the soil monitoring data. The following two options aim to address these concerns.

Option 1

This option foresees that, in cases where a Member State uses an analytical methodology other than CEN/ISO, a LUCAS laboratory carries out an additional analysis, with the standard methodology of Annex II, on a limited number of samples. The results of these measurements with two different methods would then help to further refine the transfer functions to be used to convert the value measured by the Member States to the value measured by the reference methodology.

Text proposal for option 1:

- Add in article 8(3) the following subparagraphs:
 - “**Member States shall provide the Commission with:**
 - **A representative number of soil measurements performed by their chosen laboratories using the methodology for which a validated transfer function is required;**
 - **The relevant soil samples on which the soil measurements were performed by the laboratories.**

The Commission shall perform measurements of the soil samples provided by Member States in accordance with the subparagraph above using the relevant reference methodology referred in part B of Annex II.

The Commission shall communicate the results of its measurements to the Member States and validate, where relevant, the transfer function.”

Option 2

To further harmonise the sampling protocol, the Soil Monitoring Law could foresee an implementing act with a more detailed sampling protocol. Such provision could help to further define aspects like the sampling tools that have to be used, the season or timing of the sampling, the approach under wet conditions, the preparation, preservation and transport of the sample, etc.

Text proposals for option 2:

- Add in article 8(2) of the GA the following:
“The in-situ soil sampling shall be carried out in accordance with the minimum criteria for the methodology of field sample survey defined in Part A.2 of Annex II **and the sampling protocols established by the Commission in accordance with paragraph 7**”
- Add a new para 7 reading as follows:
“**The Commission shall adopt implementing acts to establish the sampling protocol referred to in paragraph 2. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 21. “**

Part C - Archiving

Archiving of soil samples is a relatively common practice. All LUCAS soil samples are archived in Ispra (Italy), and the Commission will continue to do so in the future. If needed, this could be explained in a recital. Archived soil samples allow a comparative analysis of (new) laboratory methods now or in the future and provide a reference for further research. Archived samples can be re-analysed at a later stage to test for new emerging parameters without having to go to the field again (saving costs). The European Parliament proposed the following recital 31a (with proposed modification added), which could be further finetuned depending on the options chosen:

*(31a) Soil archives preserve a snapshot of soils from a specific time and location, allowing **further checks of relevant parameters or future analysis of new emerging parameters in a cost-efficient manner without the need to take new samples.** Soil archives enable researchers to re-evaluate soils of the past in the context of the present for an improved understanding of long-term soil change, or for other research purposes, including medical research.*

It is therefore imperative that the Commission, including services such as the Joint Research Centre (JRC), together with the Member States and the European Soil Observatory, ensure that the samples, DNA extracts and raw data taken for the compliance with Union and national environmental law are well preserved in physical

archives and that the samples and raw data of those archives remain available for further research and innovation.

Since LUCAS soil samples are already always archived, the following two options focus on the archiving of the samples that are taken and analysed by the Member States.

Option 1

This option foresees mandatory archiving by LUCAS of a certain percentage of the samples that were taken and analysed by Member States. This would mean that Member States would have to send part of their soil samples to the JRC in Ispra where the samples would be archived.

- Add in article 8 the following new paragraph after paragraph 5 and before paragraph 5aa:
**“5aa. For each monitoring cycle, Member States shall transfer [X%] of their soil samples to the Commission’s soil archive.
The Member States and the Commission shall define the practical arrangements regarding the shipment of the soil samples.”**

Option 2

- This option foresees mandatory archiving by Member States of a certain minimum percentage of the samples that were taken and analysed by Member States. This would mean that Member States have to store part of the soil samples in national (or regional) soil archives. Add in article 8 the following new paragraph after paragraph 5 and before paragraph 5aa:
“5aa. For each monitoring cycle, Member States shall store at least [X%] of their soil samples in dedicated soil archives.”

ANNEX II

Changes to the scope and method of certain descriptors testing

PART A - Additional list of soil contaminants subject to targeted sampling

The following two options regarding the targeted monitoring of selected soil contaminants are building on the text proposal of the PL PCY. These two options intend to address the EP requests of ensuring proper assessment of PFAS and pesticides in soils, while taking into account the request by Member States to having a solution that adds value and is implementable.

- *Option 1 provides for an indicative list of soil contaminants to be monitored in a targeted manner under Part C of Annex I soil contaminants (the list needs to be taken into account, but the choice of the contaminants is up to the MS provided that a selection of PFAS and pesticides are included by the MS).*
- *Option 2 provides the provisions for a mandatory list of soil contaminants for Part C Annex I soil contaminants (all contaminants in the list need to be monitored on a limited number of samples).*

NOTE: Both options maintain the mandatory measurements of PFAS (PFAS total and a selection of PFAS) and a selection of pesticides (in part C of Annex I) on a reduced number of samples.

For both options provisions of other parts of the legal text need to be adapted in order to ensure overall coherence - namely articles 7, 8, 23a as well as Annexes I and II where relevant.

For both options, the following recital should be inserted.

Row 58b: Recital (48)

(48b) It is necessary to gather data on the presence of soil contaminants that may pose a risk to human health and the environment, such as pesticides, PFAS and emerging soil contaminants. In order to limit monitoring costs, a targeted approach to sampling points based on possible sources is necessary for these contaminants. This Directive should therefore provide a framework to include these contaminants into a list of soil contaminants for which targeted Union-wide soil monitoring data are to be gathered.

OPTION 1

Add new Article 7a- list of soil contaminants to be monitored on a limited number of points

Article 7a - List of soil contaminants to be monitored on a limited number of points

1. The Commission shall establish an indicative list of soil contaminants for which targeted Union-wide soil monitoring data are to be gathered.
2. The soil contaminants to be included in the list shall be selected on the basis of their potential to cause a significant risk for human health or the environment taking into account their toxicity and exposure across the EU, such as pesticides and PFAS.

3. Member States **shall** take into account this list when setting the organic contaminants for the soil descriptor related to soil contamination referred to in Part B or C of Annex I.
4. The Commission shall measure **a selection of** the soil contaminants from **this** list in the LUCAS soil survey **in a targeted part of the samples by taking into account the possible sources and occurrence of the soil contaminant, and provide Member States with the results**, if such need is expressed by the Member State **and** in accordance with Article [xx]]. ~~The selection of the sampling points shall not be random but targeted by taking into account the use patterns and possible occurrence of the soil contaminant~~
5. The Commission shall establish the first list by **[18 months after entry into force of the directive]** and shall update it based on the results of the soil monitoring and assessment and in light of scientific and technical progress.

Explanations regarding the change

In para 3, it is specified that this list only refers to Part C of Annex I. The watchlist for part B contaminants is distinct and described in article 7 of the GA.

In para 4, LUCAS Soil budgetary limitations require a selection of the contaminants measured on a targeted part of the samples.

In para 5, the timeframe for this list is aligned with the timeframe for the watchlist of the organic contaminants of part B

In article 7, add a new paragraph 3a reading as follows

“Member States shall set the contaminants for the soil descriptor related to soil contamination referred to in Part C of Annex I taking into account the list of soil contaminants referred to in article 7a as well as at least the following relevant criteria:

- **toxicity of the soil contaminant**
- **persistence and mobility of the soil contaminant**
- **quantitative data regarding the production, use, consumption or sales volumes in the concerned Member States, if available**
- **data from human biomonitoring and presence in environmental media, if available**

Explanations regarding the change:

Since soil contamination is introduced also in part C and MS need to select the contaminants that they will monitor, it is necessary to add that obligations in article 7. Criteria to do this selection are also added.

In article 8(1) add a subparagraph reading as follows

“By way of derogation from the first subparagraph, for the soil contamination descriptor referred to in part C of Annex I, Member States shall determine for each contaminant the sampling points by taking into account the possible sources and occurrence of that soil contaminant and costs. [The total number of sampling points determined in accordance with this subparagraph shall correspond to at least [X%] of the total number of sampling points determined in accordance with the first subparagraph.]”

Explanations regarding this provision

It is necessary to specify that the sampling for the soil contaminants under Part C will not be necessarily the same as for the other descriptors. It is also proposed to define how the sampling points for part C soil contaminants will be selected.

In Article 9.3 (assessment of part C descriptors, add the following part in bold)

“3. Member States shall analyse the values for the soil descriptors listed in Part C of Annex I with a view to identify whether there is a critical loss of ecosystem services, taking into account the relevant data and available scientific knowledge.

As regards soil contamination monitored under part C of Annex I, MS shall analyse the data with a view to identify whether there is a need to gather more information as regards the extent of the contamination and whether the contamination poses an unacceptable risk for human health or the environment.”

Explanations regarding this addition

- *Need to take account of the fact that the sampling is targeted for part C soil contaminants + need to reflect on the risk that such soil contamination may cause.*

In Article 23(1a), point c) add reference to the list of Article 7a(1)

Explanations regarding this provision

Similarly to the watchlist for part B, it is suggested to mention also the list for part C under the support from Commission to MS.

In Annex I, Part C, addition after line “Topsoil compaction”:

Soil contamination ³ for substances for which there is not yet enough knowledge to establish limit values in soil	<ul style="list-style-type: none"> - concentration of Total PFAS and of the selected PFAS TFA in a limited percentage of the samples; - concentration of selected pesticides and their metabolites set by Member States in accordance with article 7(3a) a limited percentage of the samples; - concentration or presence of a selection of other soil contaminants including emerging soil contaminants set by Member States in accordance with article 7(3a) and measured in a limited number of samples.
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Explanations:

-“limited percentage of the samples” is better replaced by ‘in targeted limited number of sampling points’ in the footnote in the first column;

³ To be measured on a limited number sampling points

- deletion of 'for substances for which there is not yet enough knowledge to establish limit values in soil': the notion of limit values for soil contaminants is not used as such in the SML.

- TFA was deleted because it's very mobile in soil, is therefore expected to have seasonal variability in soil, and is better tested in water and food. TFA test has been replaced with a selection of PFAS. For example, with one test it is possible to measure the concentration of 43 PFAS which are required in water and food legislation, precursors to PFAS-4 (PFOS, PFOA, PFNA, PFHxS) including PFOS derivatives, and few additional PFAS indicators for important contaminations across the EU.

In Annex II, part B add a reference that the methodologies also apply to soil contaminants referred to in part C of Annex I

<p>- Concentration of heavy metals in soil: As, Sb, Cd, Co, Cr (total), [...] Cu, Hg, Pb, Ni, Ti, V, Zn –</p> <p>Concentration of a selection of organic contaminants defined by Member States and taking into account existing Union [...] legislation (e.g. on water quality or pesticides) [...]</p> <p>Concentration of Total PFAS</p> <p>Concentration of pesticides</p> <p>Concentration or presence of other contaminants set by Member States in accordance with article 7(3a)</p>	<p>For heavy metals : ISO 54321: Aqua Regia Optional: bioavailable fractions of contaminants, such as ISO 17586 using dilute nitric acid.</p> <p>For soil contaminants other than heavy metals : n/a</p>	<p>For soil contaminants other than heavy metals</p> <p>Use European or International standards when available; if such standard is not available, the methodology chosen shall either be available in the scientific literature or publicly available</p>	<p>YES Not applicable if European or International standards are not available [...]</p>
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PART B - Additional list of soil contaminants subject to targeted sampling

OPTION 2 (mandatory list of soil contaminants for part C soil contaminants).

Add new Article 7a - list of soil contaminants subject to targeted monitoring (based on PL PCY proposal)

Article 7a- List for soil contaminants to be monitored on a limited number of points

1. The Commission shall **is empowered to adopt delegated acts in accordance with Article 20 to supplement this Directive** by establishing an indicative list of selected soil contaminants for which targeted Union-wide soil monitoring data are to be gathered.
2. [The Commission shall **adopt shall implementing acts in accordance with Article 21 to** establish an indicative list of selected soil contaminants for which targeted Union-wide soil monitoring data are to be gathered.]
3. The soil contaminants to be included in the list shall be selected on the basis of their potential to cause a significant risk for human health or the environment taking into account their toxicity and exposure across the EU, such as pesticides, PFAS and emerging contaminants. ~~and PFAS~~
4. ~~Member States may take into account the watch list when setting the organic contaminants for the soil descriptor related to soil contamination referred to in Part B or C of Annex I.~~
5. The Commission shall measure the soil contaminants from the list in the LUCAS soil Survey [, if such need is expressed by the Member State **and in accordance with Article [xx]]. The measurements shall be made on targeted sampling points determined by taking into account the possible sources and occurrence of the soil contaminant.** ~~The selection of the sampling points shall not be random but targeted by taking into account the use patterns and possible occurrence of the soil contaminant~~
6. The Commission shall establish the first list by [**18 months after entry into force of the directive**] and shall update it **before each monitoring cycle** based on the results of the soil monitoring and assessment and in light of scientific and technical progress.

Explanations:

- *If the list is mandatory, the list has a legally binding nature and hence the correct legislative instruments should be used (delegated or implementing act).*
- *If the list is mandatory, MS no longer have the possibility to choose the soil contaminants, hence deletion of para 4.*
- *Timeframe of the list aligned in para 5 with the timeframe set in the GA for the watchlist of article 7 related to organic contaminants under part B.*
- *Para 4 may need to be adjusted depending on the outcome of the discussion on LUCAS. Possible reinforced role for LUCAS for the monitoring of these contaminants should be set here.*

In Article 8(1) add a subparagraph reading as follows (same as Option 1)

“By way of derogation from the first subparagraph, for the soil contamination descriptor referred to in part C of Annex I, Member States shall determine for each contaminant the sampling points by taking into account the possible sources and occurrence of that soil contaminant and costs. [The total number of sampling points determined in accordance with this subparagraph shall correspond to at least [X%] of the total number of sampling points determined in accordance with the first subparagraph.]”

Explanations:

It is necessary to define how the sampling points for Part C soil contaminants will be selected since there will be a targeted monitoring (by contrast to the general selection that is random based on statistical methodology).

In Article 9.3 (assessment of Part C descriptors, add the following part in bold) (same as Option 1)

“3. Member States shall analyse the values for the soil descriptors listed in Part C of Annex I with a view to identify whether there is a critical loss of ecosystem services, taking into account the relevant data and available scientific knowledge.

As regards soil contamination monitored under Part C of Annex I, MS shall analyse the data with a view to identify whether there is a need to gather more information as regards the extent of the contamination and whether the contamination poses an unacceptable risk for human health or the environment.”

Explanations regarding this addition

- *Need to take account of the fact that the sampling is targeted for Part C soil contaminants + need to reflect on the risk that such soil contamination may cause.*

+ Amend Article 20 + recital 51 if delegated act

In Article 20, add reference to Article 7a(1) in para 2, 3 and 6

In Recital 51, add **“the list for soil contaminants for which targeted Union-wide soil monitoring data are to be gathered.”**

Amend recital 52 if implementing act as follows

Add **“the list for soil contaminants for which targeted Union-wide soil monitoring data are to be gathered.”**

Annex I, Part C, addition after line “Topsoil compaction”:

<p>Soil contamination⁴ for substances for which there is not yet enough knowledge to establish limit values in soil</p>	<ul style="list-style-type: none"> - concentration of Total PFAS and of selected PFAS concentration of selected pesticides and their metabolites mentioned in the list referred to in art 23a/7a in a limited percentage of the samples; - concentration or presence of a selection of other soil contaminants established by Member States taking into account mentioned in the list referred to in art 23a/7a and measured in a limited number of samples.
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⁴ To be measured in targeted sampling points

In Annex II, Part B insert a reference that the methodologies also apply to soil contaminants referred in Part C of Annex I (same as Option 1)

<p>- Concentration of heavy metals in soil: As, Sb, Cd, Co, Cr (total), [...] Cu, Hg, Pb, Ni, Tl, V, Zn –</p> <p>Concentration of a selection of organic contaminants defined by Member States and taking into account existing Union [...] legislation (e.g. on water quality or pesticides) [...]</p> <p>Concentration of Total PFAS</p> <p>Concentration of pesticides</p> <p>Concentration or presence of other soil contaminants mentioned in the list referred to in art 7a</p>	<p>For heavy metals : ISO 54321: Aqua Regia Optional: bioavailable fractions of contaminants, such as ISO 17586 using dilute nitric acid.</p> <p>For soil contaminants other than heavy metals : n/a</p>	<p>For soil contaminants other than heavy metals :</p> <p>Use European or International standards when available; if such standard is not available, the methodology chosen shall either be available in the scientific literature or publicly available</p>	<p>YES</p> <p>Not applicable if European or International standards are not available [...]</p>
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Annex III

Support to soil resilience

1) Recital 37a:

- a. clarify that Article 10 does not entail obligation on land managers, only support (see text in 4th sentence)
- b. link sustainable soil management and soil resilience. Sustainable soil management would only be referred to in this recital, as well as in the new definition, but no longer in article 10.

“The results of the soil health assessment performed under the Directive, will inform the process of identifying the specific practices needed to manage soil sustainably and thus increase soil resilience. Without prejudice to obligations stemming from other Union law, the provisions on soil resilience do not impose additional obligations on land owners and managers. At the same time, soil managers, landowners, land managers and relevant authorities should be supported to improve soil resilience. This support should entail, inter alia, information and advice on practices that improve soil resilience considering the local soil conditions, capacity building, promotion of awareness of the benefits of such practices, promoting research and innovation as well as assessing the technical and financial needs and facilitating the access and uptake of available financing. “

2) In Article 3(5), replace the definition of “sustainable soil management” with the definition of “soil resilience”

‘Soil resilience’ means the ability of soil to preserve its function and maintain its capacity to provide ecosystem services and to withstand to and recover from disturbances.

3) Modify Article 10 : **Support to soil resilience**

“Article 10 – Support to soil resilience

1. Member States shall encourage, facilitate and support landowners and land managers to improve soil resilience by, inter alia:
 - (a) ensuring easy and equal access to impartial and independent advice and information, training activities and capacity building for soil managers, landowners, land managers and relevant authorities on practices that improve soil resilience;
 - (b) promoting awareness on the medium- and long-term multiple benefits of practices that improve soil resilience;
 - (c) promoting research and innovation on sustainable soil management concepts and soil regeneration practices adapted to the local soil characteristics, climatic conditions and land use;
 - (d) providing at local level information on suitable measures and practices to increase soil health, based on the soil health assessment performed in accordance to article 9;
 - (e) making available a regularly updated mapping of available funding, instruments and activities that support soil resilience.
2. Member States shall also regularly:

- assess the technical and financial needs to improve soil resilience
- engage with the public concerned, in particular landowners and managers, and ensure that they are given early and effective opportunities to define the level of support needed;

4) Delete Annex III

5) Add the following provision as last subparagraph to Article 9(4)) :

Article 9 – assessment of soils

“4.
[.]

“The soil health monitoring data, the results of the soil health assessments and the analysis referred to in this Article (i.e Article 9) shall inform the development of the programmes, plans and measures set out in Annex IV.”

Explanations :

This provision was in article 10 of the Commission’s proposal and makes the link with other relevant EU policies. It requires that soil health data and assessment are taken into account when programmes or plans listed in annex IV are established.

6) Introduce in Article 23a (1) a new point k) reading as follows

k) provide at local level information on measures and practices to increase soil resilience pursuant to article 10(1), point d) by providing and regularly updating a repository of knowledge on soil resilience containing practical information on soil management practices.

Land take mitigation principles and relevant sectors

The mining sector (and other sectors requiring land take) would have an exception regime under the directive, as land take (limited in this context to soil sealing and soil removal) is only subject to separate monitoring to know how much land is taken and the mitigation principles (Article 11). Soil sealing and removal would thus be exempted from soil health monitoring and assessment and also from sustainable soil management (irrespective of the discussions on this point). There is also no impediment to national soil protection rules, since the SML does not impose a specific protection regime. Finally, as regards the contaminated sites, the SML does not distinguish the cause of contamination, it targets only unacceptable risks (as defined at national level) and introduces a fall-back regime, meaning that if mining is subject to distinct legislation to avoid manage risks, that legislation should be applied with priority.

The text possible proposals below make clearer these points.

Issues raised in consultations	Text proposals	Comments
Negative connotation of 'soil destruction' (terminology introduced by Council in the general approach)	In article 3(1), point 17 (Row 94) replace 'soil destruction' by 'soil removal means the temporary or long-term removal of [surface layer of] soil resulting in loss of the capacity of soils to provide ecosystem services caused by the alteration of the soil components and characteristics.	COM proposed to change 'soil destruction' into 'soil removal' across the proposal.
	In article 3(1), point 17a (Row 94a) replace definition of 'destroyed soil' by 'removed soil means an area of soil that underwent soil removal'	
	(30c) On the other hand, soil sealing and soil destruction removal , as part of the soil artificialisation aspect of land take, are different from settlement growth, as they do not focus on a land use change, but rather on a concrete and measurable change in the soil cover and soil characteristics. In soil sealing, the [...] soil is for example modified and	COM proposed clarification to avoid singling out a specific sector.

Issues raised in consultations	Text proposals	Comments
	<p><i>reduced to serving as a platform for constructions and infrastructure, including buildings, roads, parking, and other mineral surfaces. Soil destruction might be caused by soil removal corresponds to situations, even temporarily, when for example the soil is reduced to being used as a direct source of raw material such as minerals and lignite, during extractive mining or quarrying activities, during construction works or as part of soil sealing or [...]. It can also be found in dumping grounds, where the soil is covered by waste materials, damaging it to the point of destruction. These [...] transformations may cause the loss, often irreversibly, of the capacity of soils to provide other ecosystem services (provision of food and biomass, water and nutrients cycling, basis for biodiversity and carbon storage). In particular, [...] soil sealing is often [...] done on [...] fertile agricultural soils, [...] contributing further to the disruption of food security [...]. Sealed soil also exposes human settlements to higher flood peaks and more intense heat island effects. In addition, sealed and destroyed soils are the easiest of the soil artificialisation aspects to monitor through remote sensing and machine learning, making their monitoring easier. Therefore, sealed and destroyed soils were selected [...] to be monitored [...] together with their effects on soil's capacity to provide ecosystem services.</i></p>	
Concern that soil health would be monitored and assessed in mining areas	<p>Article 7 In article 7(1), add the following: <i>"Sealed soils and removed soils are not subject to soil health monitoring under Parts A, B and C of Annex I".</i></p> <p>Article 8 Add a new paragraph 8(5b) as follows : <i>"Paragraph 2 of this article does not apply to sealed soils and removed soils"</i></p>	Based on the general approach which already inserted a provision stating that no soil samples are to be taken where soil is sealed or destroyed, COM proposed to explicitly clarify in article 7 and article 8 that soil health is not to be monitored in areas where soils is sealed or removed. With this

Issues raised in consultations	Text proposals	Comments
		additional clarification, it would now be crystal clear, that A) no soil samples are taken in sealed/removed soils and B) that soil health is not monitored in these areas. Land taken is only monitored under Part D of Annex I through remote sensing which is a cost-effective and pragmatic approach.
	Article 10 Add a new paragraph in article 10 as follows: <i>“This article shall not apply to soils sealed or removed and, until a decision to de-seal or renature them is taken.”</i>	COM also proposed to clarify that sustainable soil management (article 10) do not apply to sealed and destroyed soils until a de-sealing or renaturation decision is taken. If Article 10 is changed to move away from sustainable soil management to soil resilience, this change becomes irrelevant.
	New recital added: 30ca) <i>Due to the alteration of the soil components and characteristics, resulting in a loss of the capacity of soils to provide ecosystem services, sealed and removed soils should not be subject to the soil health monitoring descriptors and criteria for healthy soils, but subject to a separated monitoring regime. Therefore specific soil sealing and soil removal indicators should be set.</i>	Addition of a new recital clarifying that sealed and removed soils are not subject to the soil health monitoring descriptors and criteria for healthy soils.
Concern that the land take mitigation principles (article 11) would delay or prevent new industrial projects by requiring a	Recital 30e modified as follows to clarify impacts on industrial projects: <i>(30e) The principle of the reduction mitigation of the impact is essential when it comes to soil sealing and soil</i>	COM proposed recital clarifying the interpretation of article 11 (of general approach) and that the SML should not entail a new permitting procedure and

Issues raised in consultations	Text proposals	Comments
new or prolong existing permitting procedure	<p>destruction removal in general. Indeed, it is vital to find a balance between the needed economical and demographic growth, and the provision of ecosystem services. As such, it is [...] appropriate to lay down certain principles to mitigate the impacts of [...] soil sealing and soil destruction removal as part of sustainable soil management, by adopting an effort-based approach taking into account a large set of good practices aimed at minimizing and offsetting the loss of soil's capacity to provide ecosystem services. They should be based on the land take hierarchy of the EU Soil Strategy for 2030, taking into account different conditions and geographical and administrative circumstances in Member States. The provisions concerning land take in this directive should not entail a new permitting procedure and should not prevent permitting of activities for projects of overriding public interest, and should not impinge on the spatial planning decisions that fall under the competence of the national, regional or local authorities.</p> <p>. (47) Measures taken pursuant to this Directive should not jeopardize the provision of raw materials and also take account of other EU policy objectives, such as the objectives pursued by [Regulation (EU) xxxx/xxxx45] that aim at ensuring secure and sustainable supply of critical raw materials for Europe's industry.</p>	<p>should not prevent permitting of activities for projects such as those that aim at ensuring secure and sustainable supply of critical raw materials, sustainable housing, essential infrastructure and renewable energy projects, and should not impinge on the spatial planning decisions that fall under the competence of the national, regional or local authorities.</p> <p>The general approach already clarified in this recital (1) the flexibility of MS to apply the principles at the spatial level of their choice (strategic or project) and (2) the effort-based nature obligation to apply the principles.</p>
Concern that the 2050 objective could impact permitting	<p>Text as amended by general approach.</p> <p>(23) The aspirational long-term objective of the Directive is to achieve healthy soils by 2050. As an intermediate step, in light of the limited knowledge about the condition of soils</p>	<p>The general approach already clarifies that the objective in Article 1 is aspirational only.</p>

Issues raised in consultations	Text proposals	Comments
	<p>and about the effectiveness and costs of the measures to regenerate their health, the Directive takes a staged approach. In the first stage, the focus will be on setting up the soil monitoring framework and assessing the situation of soils throughout the EU. It also includes requirements to lay down measures to manage soils sustainably—and, regenerate unhealthy soils, once their condition is established,—but without imposing as well as assess and manage the risks of contaminated sites. However, it does not impose an obligation to achieve healthy soils by 2050—neither nor intermediate targets.</p>	

NEW recital (30f)

“Without prejudice to national rules regarding the system of property ownership, the implementation of the land take compensation mitigation principle under this Directive should also be beneficial to landowners and land managers, in particular farmers and foresters since land take predominantly takes place at the expense of agricultural land.”

Add in recital 30e the following provisions

Rehabilitation or reuse of abandoned brownfield and industrial sites can in particular play an important role to avoid new land take and new soil artificialization and therefore it would be useful to keep an inventory of these sites or to identify them. The directive leaves the Member States with full flexibility on how to implement best the mitigation principles, including by making recourse to incentives to restore and reuse abandoned areas with sealed soils.