

2011



**PROPOSAL OF ALTERNATIVE
TEXT FOR A FRAMEWORK
DIRECTIVE ON SOIL
PROTECTION**

COMMON FORUM TEXT PROPOSAL FOR A FRAMEWORK FOR THE PROTECTION OF THE SOIL

I. INTRODUCTION

- (a) This paper summarises work by the European Common Forum on Contaminated Land to produce a proposal of alternative text for the proposed EU Soil Framework Directive. The aim of this work is to inject new thinking into the negotiation of the proposed Directive.
- (b) The Commission submitted its proposals for a Thematic Strategy for Soil Protection and a Proposal for a Directive establishing a framework for the protection of soil to the Council and to the European Parliament on 22 September 2006. The proposal for a Directive is based on Article 192(1) of the Treaty on the Functioning of the European Union.
- (c) The Committee of the Regions and the Economic and Social Committee delivered their favourable Opinions on 13 February and on 25 April 2007 respectively.
- (d) The European Parliament adopted its first-reading opinion on 14 November 2007.
- (e) In the Council, extensive discussions on the above-mentioned proposal took place in 2007 under the Portuguese Presidency, in 2008 during the French Presidency, in 2009 under the Czech Presidency, and in 2010 under the Spanish Presidency.
- In the course of these discussions, progress was made on many elements of the proposed Directive. However, important differences in positions remained on a number of key issues, such that no overall agreement was reached.
- (f) The Common Forum is an informal network of contaminated land policy experts and advisors, drawn mainly from Member State governments and competent authorities, and was created in 1994 (<http://www.commonforum.eu>). The Common Forum provides mutual professional support by:
- Being a platform for exchange of knowledge and experiences
 - Establishing a discussion platform on policy, research, technical and managerial concepts of contaminated land

- Being a platform for initiating and following-up of international projects among members
- Offering an exchange of expertise to the European Commission and to European and International Networks.

(g) The Common Forum has continuously discussed the technical and political aspects of the contaminated soil issues in the original proposal and in the alternative versions under each Presidency. Having failed to reach agreement in Council, in light of the desire of many Member States to have a framework directive for soil, and convinced that common grounds could be found, a “special task force” of Common Forum members from some Member States was established in July 2010 during the Belgian Presidency. The task force discussed the reasons for not being able to reach agreement in Council and proposed amendments to the draft Directive. Experts on soil degradation processes covered in Chapter II (erosion, organic matter loss, landslides, etc.) were also invited and brought their experience to the discussions. The amendments were approved by the Common Forum in autumn 2011.

(h) The reasons for opposing the Directive vary from one Member State to another. Therefore the **main focus for this work was to:**

- identify the key issues where differences in position remained, in relation to both contaminated land and soil degradation processes, and develop alternative textual suggestions that offered possible solutions to some of these key issues
- consider the ability to implement the Directive, the level and scale of monitoring of the action plans, and the cost effectiveness of any proposed measures
- highlight the requirement for any EU framework regulation to take into account existing national legal regulations and the experiences acquired in soil protection and remediation in Member States over the past 30–35 years; in particular in terms of efficiency for reducing risks for human health and the environment.

(i) The discussions also took into account:

- The wish to agree common principles in relation to managing soil based on the principle of sustainability, focusing on preventing soil threats as a priority and agreeing a more targeted, risk-based approach to identification and remediation
- Other environmental thematic needs such as the Water Framework Directive, the Common Agriculture Policy, etc., and broader issues such as desertification, climate change and biodiversity.
- An additional consideration was the need to avoid fragmentation of soil protection and soil remediation regulations in the EU legal framework. Currently there is a dispersion of EU soil provisions that causes difficulties in transposition and implementation (examples include the definition of unpolluted soils in the Mining Residues Directive and of polluted soils in the Renewable Energies Directive, management of excavated soils on a hazard basis under the revised Waste Directive, remediation to baseline conditions for some sites and to risk levels for other under the Industrial Emissions Directive, etc.).

(j) **The main changes proposed in this alternative draft**, based on the last version discussed at official parties (so called Spanish Version, March 2010) are:

- Clarified definitions,
- With respect to the contaminated land provisions, an improved overall scheme, which is more targeted and risk-based and that has enough flexibility to take into account local conditions and Member State priorities
- An on-going dynamic approach, which has a timetable for setting the start of actions, for seeing the progress done by Member States and adapting to new situations
- Some points have been left open for more discussions, for taking into consideration official parties' conclusions and some pending concerns. These relate to:
 - The way to remove sites from the registers / inventories
 - Soil Status Reports (are they really needed in an on-going and public procedure? If so, what type of report should they be and what should the minimum content be?)
 - The need of comitology actions on the methodology of risk assessment.

With respect to Chapter II, a more flexible and efficient, but equally rigorous approach to identifying priority areas that takes into account differences in Member States' local circumstances, within the constraints of existing scientific knowledge.

(k) This file includes:

1. An alternative text proposal incorporating tracked changes ;
2. A cleaned version of the above text proposal, with tracked changes removed, to provide an overview of what this draft could look like.

(l) For any information demand, comment, or suggestion, please feel free to contact Dominique DARMENDRAIL, General Secretary of the Common Forum on Contaminated Land in Europe (email: commonforum-secretariat@brgm.fr).

Proposal for a
DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
establishing a framework for the protection of soil
(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Economic and Social Committee ^{*},

Having regard to the opinion of the Committee of the Regions ^{**},

Acting in accordance with the ordinary legislative procedure ^{***},

Whereas:

[Recitals omitted]

* OJ C 168, 20.7.2007, p. 29.

* * OJ C 146, 30.6.2007, p. 34.

* ** Opinion of the European Parliament of 14 November 2007 (OJ C 282 E, 6.11.2008, p. 281), Council common position of ... (OJ C) and position of the European Parliament of (not yet published in the Official Journal). Legislative resolution of the European Parliament of ... (not yet published in the Official Journal) and Council decision of ...

HAVE ADOPTED THIS DIRECTIVE:

Chapter I

General provisions

Article 1

Subject-matter and scope

1. This Directive establishes a framework for the protection of soil, its sustainable use and the preservation and, where technically feasible and costs are proportionate to the expected environmental and social benefits, restoration of the capacity of soil to perform as many as possible of the following environmental, economic, social, scientific and cultural functions (whilst taking into account that some functions are mutually exclusive):

- (a) food and other biomass production, including in agriculture and forestry;
- (b) storing, filtering and transforming nutrients, substances and water, as well as replenishing bodies of groundwater;
- (c) basis for life and biodiversity, such as habitats, species and genes;
- (d) physical and cultural environment for humans and human activities;
- (e) source of raw materials;
- (f) acting as carbon reservoir;
- (g) archive of geological, geomorphological and archaeological heritage.

To that end, it lays down measures for the prevention of soil degradation processes, caused by a wide range of human activities with due account also being taken of natural causes, which significantly adversely affect the capacity of a soil to perform those functions ~~while taking into account that some functions are mutually exclusive~~. To address such soil degradation processes, it also lays down provisions for establishing measures for the restoration and remediation, including mitigation, of degraded soils to a level of functionality consistent at least with its current or approved future use.

2. This Directive shall apply to soil as defined in Article 2(1), excluding

(i) groundwater as defined in Article 2(2) of Directive 2000/60/EC of the European Parliament and of the Council^{*} and as covered by Directive 2006/118/EC of the European Parliament and of the Council^{**},

(ii) the seabed, and

(iii) soil that forms part of bodies of surface water under Article 2(10) of Directive 2000/60/EC.

3. Member States may decide, if so provided under national law, not to apply this Directive to soil where ongoing activities serving national defence purposes are taking place, if they deem that such application would have an adverse effect on those purposes. Member States shall, however, endeavour to ensure that such activities are conducted in a manner that is compatible, so far as reasonable and practicable, with the objectives of this Directive.

* OJ L 327, 22.12.2000, p. 1.

* * OJ L 372, 27.12.2006, p. 19.

Article 2
Definitions

For the purposes of this Directive, the following definitions shall apply:

- (1) "soil" means the top layer of the Earth's crust situated between the bedrock and the surface. The soil is composed of mineral particles, organic matter, water, air and living organisms;
- (2) "sealing" means the permanent covering of the soil surface with an impermeable material¹;
- (3) "hazardous substances" means substances or mixtures within the meaning of Regulation (EC) No 1272/2008 of the European Parliament and of the Council **;
- ~~(3a) "potentially soil-contaminating activities" means human activities which have the potential to damage soil significantly due to the use, handling or storage of hazardous substances and which could result in contaminated sites;~~
- (4) "contaminated sites" means sites where there is a confirmed presence, caused by human activities, of hazardous substances at such a level that Member States consider that they pose a significant risk to human health or the environment, including groundwater. Such risk is to be assessed taking account of the current or approved future use of the land, all known relevant contaminant pathways and the extent of exposure;

¹ New Recital to include (cf. soil sealing expert report): covering of soil by buildings, constructions, roads and layers of completely impermeable artificial material (e.g. asphalt and concrete). It is important to note that only part of a settlement area is subject to soil sealing, as gardens and urban parks are not sealed.

* ^{*} OJ L 353, 31.12.2008, p. 1.

~~(5) "inventory" means the inventory of contaminated sites in a Member State;~~

(5) "remediation" of contaminated sites means actions aimed at the removal, control, containment or reduction of contaminants or exposure pathways so that the site, taking account of its current use or approved future use, no longer poses a significant risk to human health or the environment. Remediation actions may involve monitored natural recovery.

~~(6) "priority areas" means areas where there is decisive evidence, or legitimate grounds for suspicion, that one or more soil degradation processes exceeding the level of risk acceptability referred to in Article 6(2)(b) is occurring or is likely to occur in the near future;~~

~~(76)~~ "soil degradation processes" means:

(i) erosion by water or wind²;

(ii) organic matter decline brought about by a steady downward trend in the organic fraction of the soil, or losses in the volume or stock of organic matter including peat, but excluding undecayed plant and animal residues;

(iii) compaction through an increase in bulk density and a decrease in soil porosity;

(iv) salinisation through the accumulation in soil of soluble salts;

(v) landslides brought about by the down-slope, moderately rapid to rapid movement of masses of earth above the bedrock;

(vi) acidification by significantly decreasing the soil pH value.

² Coastal erosion is not comprised in this consideration..

Article 3
Integration

Without prejudice to and where not required by Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment, sectoral policies which can significantly exacerbate or reduce soil degradation processes. Member States shall take into account the impacts of such policies on these processes; in particular in areas such as regional and urban spatial planning, transport, energy, agriculture, rural development, forestry, raw material extraction, trade and industry, product [and waste](#) policy, tourism, climate change, environment, nature and landscape.

Article 4
Precautionary and preventive measures

For the purpose of preserving the soil functions and the sustainable use of soil referred to in Article 1(1), Member States shall ensure that appropriate and proportionate measures are taken, according to national or regional circumstances:

- (a) to prevent or minimise adverse effects from actions that Member States consider are likely to [cause degradation processes that](#) hamper significantly any of the soil functions referred to in Article 1(1);
- (b) to limit the intentional or unintentional introduction [of hazardous substances that Member States consider relevant](#) in order to avoid [the](#) accumulation of those hazardous substances on or in the soil that would significantly hamper soil functions or give rise to significant risks to human health or the environment, excluding those due to long-range air deposition and those due to a natural phenomenon of exceptional, inevitable and irresistible character;
- (c) to prevent [or, if not possible, minimise](#) the intentional and unintentional introduction of [relevant](#) hazardous substances [that Member States consider relevant](#) on or in the soil by dumping, leaking or spilling.

For the purpose of this Article, Member States may use their existing national, regional and local measures and programmes already set up under national or [Union](#) legislation or international agreements as well as voluntary measures.

Article 5

Sealing

For the purpose of preserving the soil functions and the sustainable use of soil referred to in Article 1(1), taking into account relevant environmental, social and economic benefits from sealing,

Member States shall [...] take appropriate and proportionate measures ~~to~~, where necessary, to contain [...] soil sealing and, where soil sealing is to be carried out, to mitigate its effects [...].

Chapter II

Soil Degradation Processes

SECTION ONE

IDENTIFICATION OF PRIORITY AREAS

Article 6

Identification of priority areas requiring special protection from soil degradation processes

1. Member States shall identify priority areas, ~~as defined in Article 2(6),~~ on their national territory, and at the administrative level that they consider appropriate, requiring special protection against soil degradation processes defined in Article 2(7).
2. By ...^{*}, Member States shall identify, ~~having regard to paragraph 6,~~ the soil degradation processes which are of relevance and significance for their territory or part of their territory. For such degradation processes, Member States shall, at the administrative level and geographical scale that they consider appropriate:
 - (a) evaluate, based on but not restricted to the indicative elements listed in Annex I, the extent to which their national territory is ~~subject or likely to be subject in the near future, i.e. at risk of,~~ vulnerable to such degradation processes;³
 - (b) establish the ~~levels of risk acceptability, which can vary from area to area, of the soil degradation processes, methodology and criteria by which they shall identify priority areas, taking at least into account the vulnerability as established under point (a), having regard to~~ the objective of preserving soil functions pursuant to Article 1(1) and the sustainable use of soil and land which can vary from area to area and within an area;⁴

^{*} 7 years after entry into force.

³ Insertion in the recital of the meaning of “vulnerable area”, i.e. a defined geographical area which is likely to be significantly subject to a particular soil degradation process based on inherent characteristics

⁴ Insertion in the recital that other criteria can relate to technical, scientific, social and economical aspects.

- (c) identify priority areas on their national territory, ~~at the administrative level and geographical scale that Member States consider appropriate, that exceed the levels of risk acceptability established in point (b)~~ using the methodology and criteria as established in paragraph 2(b).
3. For the purpose of the evaluation carried out under paragraph 2(a), Member States may base the identification of the vulnerability of the areas on empirical evidence or validated models. Where appropriate existing data, including maps and research, may be used.
4. For the purpose of paragraphs 2(b) and 2(c), Member States shall take into account, as far as relevant and feasible, the effects of those processes on greenhouse gas emissions, desertification and soil biodiversity loss.
5. The priority areas identified pursuant to paragraph 2(c), shall be made public and updated at least every ten years recognizing that ~~levels of acceptable risks~~ the methodology and criteria could be updated.
6. Where, on the basis of the physical and climate characteristics of its territory, a Member State considers that one or more of the soil degradation processes ~~referred to in paragraph 2~~ are not occurring or will not be likely to occur in the near future in ~~their~~ its territory or part of ~~their~~ its territory at a level considered relevant with regard to the preservation of the soil functions pursuant to Article 1(1) and the sustainable use of soil, it shall notify the Commission thereof within four years after entry into force of this Directive.
7. Member States shall designate the competent authorities to be responsible for the identification of priority areas.

(Article 7: deleted)

SECTION TWO
ESTABLISHMENT OF TARGETS AND ACTION PROGRAMMES

Article 87

Action programmes to combat soil degradation processes

1. For the purpose of preserving or, where technically feasible and costs are proportionate to the expected environmental and social benefits, restoring the soil functions and ensuring the sustainable use of soil referred to in Article 1(1), Member States shall, in respect of the priority areas identified in accordance with Article 6, draw up, at the administrative level and geographical scale that they consider appropriate, an action programme including at least:

a. ~~risk reduction targets~~, appropriate and proportionate measures ~~to reach those targets~~ to prevent or reduce soil degradation processes;

a.b. targets and a timetable for the uptake and the implementation of those measures ~~and;~~⁵

b.c. an estimate of the allocation of financial resources for their implementation.

Such programmes may use existing national, regional and local measures and programmes already set up under national or Community legislation or international agreements as well as voluntary measures. The action programmes may include statutory, administrative or contractual measures.

⁵ Inclusion in the recital that targets can be quantitative and/or qualitative, they can relate to prevention, mitigation, adaptation or restoration measures, to the level of uptake of the measures, and they can differ from area to area, from a land use or a soil threat to another.

2. When drawing up and revising the various elements of the action programmes pursuant to paragraph 1, Member States shall give due consideration to the social and economic impacts, cost-effectiveness and technical feasibility of the measures envisaged as well as enhance coherence with existing national, regional and local measures and programmes, in particular those taken in the context of cross-compliance and rural development within the CAP.

Member States shall indicate in their action programmes how the measures are to be implemented and how they will contribute to the ~~achievement of the environmental targets established~~ prevention or reduction of soil degradation processes.

3. Where an area is identified as requiring special protection from different concurrent soil degradation processes, Member States may adopt a single programme in which appropriate ~~risk reduction targets~~ and proportionate measures are ~~to be set~~ taken for all the degradation processes identified ~~together with the appropriate measures for reaching those targets~~.
4. The action programme shall be drawn up by ...^{*} and shall be in application no later than by ...^{**}.

The action programme shall be made public and shall be updated at least every five years and reviewed at least every ten years.

(Article 9: deleted)

* 9 years after entry into force. RO: 10 years.
* 10 years after entry into force. RO: 12 years.

CHAPTER III
SOIL CONTAMINATION

SECTION ONE
IDENTIFICATION AND INVENTORY

Article ~~10-8~~

Identification ~~and inventory of contaminated sites of priority sites to be investigated~~

~~1. Member States shall, in accordance with the procedure laid down in paragraphs 2 and 3, identify contaminated sites, as defined in Article 2(4), on their national territory.~~

~~2. For the purpose of paragraph 1, Member States shall:~~

~~(a) within one year from [transposition date], adopt and make public a list, covering the whole territory of the Member State and at the administrative level that the Member State considers appropriate, of potentially soil-contaminating activities, on the basis of the indicative activities listed in Annex II;~~

~~(b) within seven years from [transposition date], have identified, if they have not yet done so, the location of at least the sites where the potentially soil-contaminating activities referred to in point (a) are taking place or have taken place in the past. The identification shall be updated at regular intervals;~~

1. Member States shall identify priority sites on their national territory, at the administrative level that the Member State considers appropriate, which will be made subject to site specific investigation in accordance with the procedure described in Article 9.

2. Within 2 years from [transposition date] Member States shall adopt the method and criteria by which they shall establish whether a site should be considered to be a priority site. Member States shall publish the method and criteria.

3. The method and criteria required by paragraph 2 shall, as a minimum, include an initial consideration of:

a. Whether or not potentially soil-contaminating activities are likely to have taken place on sites (currently or in the past), taking into consideration the activities listed in the indicative Annex II;

b. The current use of the site, and the likelihood that significant risks may exist, having particular regard to sensitive uses, presence of receptors, and types of hazardous substance;

c. Whether the site has already been assessed for contamination and the findings of such assessment, or whether it has already been remediated.

4. Within seven years from [transposition date], Member States shall compile and publish a register of priority sites for investigation, hereinafter the register. The register should continue to evolve over time and will be updated and published accordingly. Member States shall add sites to their register if new priority sites are found, for example if new evidence comes to light that a site poses a greater risk than previously thought. Member States may remove sites from their register if they have ceased to be priority sites (e.g. because they no longer pose a significant risk, or if new evidence comes to light that they pose a lesser risk than previously thought).

5. Member States may define a strategy for other potentially contaminated sites not included in the register of priority sites for investigation.

(Recital: article 10.6 is intended to recognize that some sites in their current use may not pose sufficient risks to be placed in the register of priority sites at the current state of information. They might become a problem if the land use is changing for a more sensitive use or will lead to site conditions creating unacceptable risks and if there is no strategy for dealing with that. Therefore Member states should record the history of the sites, the results of investigation, the remediation works done and /or the level of risks taken into consideration for assessing sites. Also for remediated sites there is the possibility to gain a significant risk in the future)

Article 9

Investigation strategy and inventory of contaminated sites

1. Member States shall ensure that an investigation procedure is conducted on the sites mentioned in the register of priority sites for investigation established in Article 8 (4). The investigation procedure conducted on a site must allow the competent authority to conclude whether or not the site is a contaminated site.

2. For the purpose of Article 9 (1), Member States shall ensure, if they have not already done so, that:

~~_(e)—for sites identified in accordance with point (b), in order to assess the possibility of a site being a contaminated site, i.e. posing a significant risk to human health or the environment, ensure that:~~

a) An assessment is made of: (i) the existing information on present and past activities on the site, in particular as regards to the handling, use and storage of relevant hazardous substances over time, and any evidence of accidents involving the emission of such substances; ~~or~~ and (ii)

~~an assessment of~~ the presence of human or environmental receptors that could suffer from any contamination, taking into account all known relevant contaminant pathways.

~~is carried out;~~

~~[...]~~

~~(d)—for sites where the assessment carried out under point (c)(i) or (c)(ii) indicates a significant probability of a site posing a significant risk to human health or the environment, ensure that the~~

b) An assessment is made of concentration levels of relevant hazardous substances linked to the activities carried out on the site ~~are measured~~, for any site where the Member State considers that the assessment carried out under point (a) indicates that there is a significant probability of a site posing a significant risk to human health or the environment. For that

purpose, Member States shall establish the methodology necessary for determining those concentration levels.

~~(e) — for sites identified in accordance with point (d) where the concentration levels of relevant hazardous substances are such~~

c) A risk assessment is carried out for any site where the Member State considers, having taken account of the assessments made under sub-paragraphs (a) en (b), that there are sufficient reasons to believe that ~~they the site~~ may pose a significant risk to human health or the environment, ~~ensure that a risk assessment is carried out, which also takes into account the risk to~~ including groundwater.

~~Member States may prioritise the identification on the basis of criteria that they consider of relevance, e.g. sensitive uses, presence of receptors, type of hazardous substance. Furthermore, Member States may determine that a site is a contaminated site on the basis of the outcomes of either paragraph 2(e), (d) or (e) 2(a), (b) or (c). Moreover, in the course of the identification process, Member States may proceed directly to the identification steps set out in paragraph 2(d) or (e) 2(b) or (e) 2(b) or (c) to determine whether a site is a contaminated-site .~~

If the assessments carried out pursuant to either paragraph ~~point (e) or (d) 2(a) or (b)~~ have not concluded that there is ~~no~~ a significant probability that a site is a contaminated site, Member States are not required to investigate further that site. Where additional information is obtained which ~~the Member State considers~~ has the potential to result in a material change in the contamination status of a site, a revised site-specific assessment shall be carried out in accordance with the specific investigation procedure described ~~in sub-paragraphs (a) to (c)~~ above.

~~3. — Member States may exempt from the investigation procedures set out in paragraph 2:~~

~~— operating installations as defined in [Article 3(3) of the Directive on industrial emissions (integrated pollution prevention and control) (Recast)] which have been granted a permit to operate that includes obligations to prevent soil contamination and to periodically monitor the state of the soil. The outcome of the monitoring shall be made available to the competent authorities for the purpose of paragraph (2);~~

~~— sites which they have already identified as contaminated sites prior to [transposition date];~~

~~— sites which they have already identified as non-contaminated sites prior to [transposition date], if the information on which the identification was based provided the same level of certainty as the provisions in paragraph 2 and if there have not been other changes which could influence the state of the soil.~~

~~3. Member States shall establish an inventory or inventories of contaminated sites covering the whole of their national territory, and at the administrative level that the Member State considers appropriate which shall be finalised within 25 years of [transposition date], having regard to continuous update requirements. The inventory shall be made public and updated at least every five years in particular to include new contaminated sites that have been identified. When updating the inventory, Member States may exclude the sites which have undergone complete remediation five years after the publication of the register of priority sites established in accordance to Article 8(4). The inventory should continue to evolve over time and will be updated and published accordingly, f.e. when new contaminated sites that have been identified.~~

~~3. When updating this inventory of contaminated sites, Member States may exclude the sites which are no longer contaminated sites. MS should maintain records of the history of actions taken on the sites that have been removed from the inventory.~~

~~5. The identification procedure provided for in paragraph 4 should be performed, if not already performed, according to the following time table :~~

~~(i) within seven years from [transposition date], for at least 10% of the sites identified in accordance with paragraph 2(b);~~

~~(ii) within 15 years from [transposition date], for at least 60% of the sites identified in accordance with paragraph 2(b).~~

~~5a. The European Parliament and the Council shall, on the basis of a report by the Commission to be presented two years from the date referred to in paragraph 5(i), examine the practical experience gained in the Member States and progress made in the pursuance of the deadline and the targets established under paragraphs 4 and 5 respectively.~~

~~— If appropriate, no later than one year after the adoption of the Commission report established pursuant to the preceding subparagraph, the European Parliament and the Council shall, in accordance with the ordinary legislative procedure, review the deadline established pursuant to paragraph (4).~~

4. Member States may add other contaminated sites to their inventories if they are identified through other means, f.e. Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions.

5. Member States shall designate the competent authorities to be responsible for the identification of contaminated sites.

(Article 11: deleted)

Article 1210

Soil status report

1. ~~Within one~~From seven years ~~from~~after [transposition date], on a site ~~on which an activity included in the list established pursuant to Article 10(2)(a) is taking place, or for which the official records, such as databases and cadastres, show that it has taken place~~included in the register, established in article 8(4), Member States shall ensure that a soil status report is made available to the relevant authority :

- by the owner of that site or the prospective buyer when the site is sold, making it also available to the other party in the transaction, and
- by the owner of that site or a relevant third party when there are changes in the type of land use ~~changes~~, including land development, which the Member State considers relevant.

Member States may also decide that soil status report is required for sites:

–removed from the register,

–in the inventory or removed from the inventory, and

–on other potentially contaminated sites of concern identified according to art. 8(6).

2. Member States shall decide on the information that must be included in the soil status report which may vary according to the use of the land, the size of a proposed development or any other relevant factors.

Without prejudice to Community and national liability regimes, the soil status report shall be issued by a body or person authorised by the Member State. Member States shall decide on the information that must be included in the soil status report which may vary according to the use of the land, the size of a proposed development or any other relevant factors. It shall include at least ~~information on the present and past activities on the site, and, if available, information on the handling, the use and storage of relevant hazardous substances over time, and any evidence of accidents involving the emission of relevant hazardous substances~~ existing and readily available information from the register or inventory, information on the contamination status of the land, the history of that status, if the site is included in the register or the inventory, if the site has been excluded of the register or inventory and for which reason.

[If the soil status report states that the site is part of the register and that the investigation procedure according to Art. 9.2 has not been conducted, the Member State shall/may ensure that the owner of that site, or a relevant third party, shall conduct an investigation procedure in accordance with Article 9.2.]

~~As part of the soil status report, Member States may require a chemical analysis for all the sites referred to in paragraph 1, determining the concentration levels of the relevant hazardous substances in the soil, limited to those substances that are linked to the activities carried out on the site. For that purpose, Member States shall establish the methodology necessary for determining those concentration levels.~~

~~3. Competent authorities may use the information contained in soil status reports for the purpose of identifying contaminated sites in accordance with Article 10.~~

~~4. — Already existing and readily available information, such as official records, on the sites referred to in paragraph 1 shall be made available upon request to the owner of the site, to the prospective buyer or to a relevant third party for the purpose of producing the soil status report.~~

5. Member States may establish a period of validity for the soil status report that they consider appropriate, ~~but not longer than 10 years~~. During such a period, the same report can be made available for successive transactions, provided that there have not been other changes which could influence the state of the soil in a way that could change the contamination status of the land, taking into account the intended land use.

SECTION TWO
REMEDIATION

Article ~~13~~11

Remediation

1. Member States shall ensure that the contaminated sites listed in their inventories of contaminated sites, pursuant to Article ~~10 (4) 9~~ (3), are remediated. ~~For that purpose, Member States shall have regard to the strategy drawn up pursuant to Article 14.~~

Without prejudice to the strategy drawn up pursuant to Article ~~14~~12, Member States may require immediate remediation for any contaminated site and shall also ensure that, where imminent threats to human health or the environment exist, temporary and urgent measures are taken to limit or to prevent further adverse effects.

2. ~~Remediation shall consist of actions on the soil aimed at the removal, control, containment or reduction of contaminants so that the contaminated site, taking account of its current use or approved future use, no longer poses any significant risk to human health or the environment. Remediation action may consist of monitored natural recovery.~~ When deciding on the remediation actions, Member States shall give due consideration to social, economic and environmental impacts and benefits, cost-effectiveness and technical feasibility of the actions envisaged. In the case of proven significant risks to water resources, remediation objectives shall be established taking into consideration relevant EU water legislation.

If the means required for remediation are not technically available, or represent a disproportionate cost with respect to expected environmental benefits, sites may be conditioned in such a way that they do not pose any significant risk to human health or the environment, ~~including by restricting access to them.~~

3. Member States may change the approved land use of a site to a less sensitive use, provided it will not pose any significant risk to human health or the environment.
4. Where containment, restriction of access or land use change are applied, the evolution of the risk to human health or the environment shall be monitored.

5. If not already established, and having regard to paragraph 2, Member States shall set up appropriate ~~economic mechanisms to provide for the investigation and the remediation of the contaminated sites for which, subject to the polluter pays principle, the natural or legal person responsible for the contamination cannot be identified or cannot be held liable under EU or national legislation or may not be made to bear the costs of the investigation and the remediation ensuring the identification of (a) those in charge of the site remediation, and (b) those responsible for bearing the costs of remediation, without prejudice to and where not required by Directive 2004/35/EG of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remediation of environmental damage.~~

6. Member States shall set up appropriate economic mechanisms to provide for the investigation and the remediation of the contaminated sites for which, the natural or legal person responsible for the contamination cannot be identified or cannot be held liable under EU or national legislation or may not be made to bear the costs of the investigation and the remediation.

~~67.~~ Where, ~~in the cases referred to above,~~ Member States fund the investigation ~~and or~~ the remediation, they shall, where ~~Member States they~~ consider appropriate, endeavour to recover the costs they have incurred in relation to the investigation or remedial measures taken pursuant to this Directive.

Article ~~14~~12

Remediation strategy

1. Member States shall, on the basis of the inventory and by ...^{*}, draw up a remediation strategy or strategies covering the whole of their national territory, including at least remediation targets, a prioritisation, taking particular account of ~~significant~~ the scale of the risks to human health or the environment, ~~a timetable and~~ and the timescale over which they might become manifest, an estimation of the financial resources that may be needed for implementation, and the likely sources of this funding.

* 9 years after entry into force.

2. The remediation strategy shall be in application and made public by ...^{**}. ~~It shall be reviewed~~
Member States shall review their strategies at least every five years.

* * 10 years after entry into force.

Chapter IV

Awareness raising, reporting and exchange of information

Article ~~15~~13

Awareness raising

Member States shall take appropriate measures to raise awareness about the importance of soil for human, biodiversity and ecosystem survival, of preventive measures for preserving soil functions, to promote the transfer of knowledge and experience for a sustainable use of soil.

Article ~~15a~~13a

Public participation

1. For the purposes of this Article, "the public" shall mean one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.
2. Member States shall ensure that the public is given early and effective opportunities to participate in the preparation, modification and review of the action programmes referred to in Article ~~8~~7, ~~the list of activities referred to in Article 10(2)(a)~~ and the remediation strategies referred to in Article ~~14~~12.

To that end, Member States shall ensure that:

- (a) the public is informed, whether by public notices or other appropriate means such as electronic media where available, about any proposals for these action programmes and remediation strategies or for their modification or review and that relevant information about such proposals is made available to the public including inter alia information about the right to participate in decision-making and about the competent authority to which comments or questions may be submitted;

- (b) the public is entitled to express comments and opinions when all options are open before decisions on the action programmes and remediation strategies are made;
- (c) in making those decisions, due account shall be taken of the results of public participation;
- (d) having examined the comments and opinions expressed by the public, the competent authority makes reasonable efforts to inform the public about the decisions taken and the reasons and considerations upon which those decisions are based, including information about the public participation process.

3. Member States shall identify the public entitled to participate for the purposes of paragraph 2, including relevant non-governmental organisations meeting any requirements imposed under national law, such as those promoting environmental protection.

The detailed arrangements for public participation under this Article shall be determined by the Member States so as to enable the public to prepare and participate effectively.

Reasonable time-frames shall be provided allowing sufficient time for each of the different stages of public participation required by this Article.

4. This Article shall not apply to action programmes and remediation strategies for which a public participation procedure is carried out under Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment. *

* OJ L 197, 21.7.2001, p. 30.

Article ~~16~~14

Reporting

1. Member States shall indicate to the Commission by ...^{*}, and every five years thereafter, how the following information to be made publicly available pursuant to this Directive can be accessed:

(a) the priority areas identified pursuant to Article 6(2)(c);

(b) the action programmes drawn up pursuant to Article ~~8~~7(1);

~~(c) the list of activities which have a significant potential to cause soil contamination drawn up pursuant to Article 10(2)(a);~~

(c) the register of priority sites established pursuant to Article 8.4;

(d) the inventory of contaminated sites established pursuant to Article ~~10(4)~~9(3);

(e) the remediation strategy or strategies adopted pursuant to Article ~~14~~12(1);

2. Furthermore, Member States shall make the following information available to the Commission in an electronic format by ...^{*}, and every five years thereafter:

(a) a summary of the measures taken pursuant to Article 5;

(b) the methodology used for identifying priority areas pursuant to Article 6(3);

(c) a summary containing the number of sites referred to in Article ~~10(2)(b)~~8(4) at the appropriate administrative level and specified by type of activity as well as the number of the sites fully investigated pursuant to Article ~~10(2)~~9.2 during the reporting period;

^{*} 10 years after entry into force.

- (d) metadata on priority areas, identified pursuant to Article 6(2)(c), ~~as documented digital georeferenced data in a format that can be read by a geographic information system (GIS) in accordance with the format required by~~ Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) *;
- (e) a summary of the measures taken pursuant to Article ~~15~~13.

Article ~~17~~15

Exchange of information

By ... *[□], the Commission shall set up a platform for the exchange of information between Member States and with stakeholders on the implementation of this Directive, particularly best practice for soil protection and remediation, the priority area identification pursuant to Article 6, on risk assessment methodologies for contaminated sites currently in use or under development and on economic mechanisms.

* OJ L 108, 25.4.2007, p. 1.

* * 1 year after entry into force.

Chapter V

Final provisions

Article ~~18~~16

Implementation and adaptation to technical progress

1. In order to allow the provisions of this Directive to be adapted to technical and scientific progress, the Commission shall adopt delegated acts in accordance with Article 18a as regards the adaptation of Annexes I and II to such scientific and technical progress.
2. Where, on the basis of the exchange of information referred to in Article ~~17~~15, a need for increased coherence is identified, the Commission shall adopt delegated acts in accordance with Article ~~18a~~16a as regards common technical elements for soil contamination risk assessment, not having any bearing on the risk acceptability.
3. By ...^{*}, the necessary provisions on data and metadata quality, utilisation of historical data, methods, access, and data-exchange formats for the implementation of the provisions of Article ~~16~~14 shall be adopted in accordance with the regulatory procedure referred to in Article ~~19~~17(2).

^{*} 4 years after entry into force.

Article ~~18a~~16a

Exercise of the delegation

1. The powers to adopt the delegated acts referred to in Article ~~18-16~~ shall be conferred on the Commission for a period of [7] years following the entry into force of this Directive. The Commission shall make a report in respect of the delegated powers at the latest 6 months before the end of the [7] year period. The delegation of power shall be automatically extended for periods of an identical duration, unless the European Parliament or the Council revokes it in accordance with Article ~~18b~~16b.
2. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.
3. The powers to adopt delegated acts are conferred on the Commission subject to the conditions laid down in Articles ~~18b-16b~~ and ~~18e~~16c.

Article ~~18b~~16b

Revocation of the delegation

1. The delegation of power referred to in Article ~~18a-16a~~ may be revoked by the European Parliament or by the Council.
2. The institution which has commenced an internal procedure for deciding whether to revoke the delegation of power shall inform the other legislator and the Commission at the latest one month before the final decision is taken, stating the delegated powers which could be subject to revocation and the reasons for a revocation.

3. The decision of revocation shall put an end to the delegation of the powers specified in that decision. It shall take effect immediately or at a later date specified therein. It shall not affect the validity of the delegated acts already in force. It shall be published in the Official Journal of the European Union.

Article ~~18e~~16c

Objections to delegated acts

1. The European Parliament and/or the Council may object to the delegated act within a period of three months from the date of notification.
2. If, on expiry of that period, neither the European Parliament nor the Council has objected to the delegated act, or if, before that date, the European Parliament and the Council have both informed the Commission that they have decided not to raise objections, the delegated act shall enter into force at the date stated in its provisions.
3. If the European Parliament or the Council objects to the adopted delegated act, it shall not enter into force. The institution which objects shall state the reasons for objecting to the delegated act.

Article ~~19~~17

Committee

1. The Commission shall be assisted by a committee, hereinafter “the Committee”.
2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.

Article ~~20~~18

Commission report

1. The Commission shall publish a first evaluation report on the implementation of this Directive within two years of receiving the action programmes and remediation strategies.

The Commission shall publish further reports every five years thereafter.

It shall submit the reports to the European Parliament and to the Council.

2. The reports provided for in paragraph 1 shall include a review of progress in the implementation of this Directive based on an assessment by the Commission based on information provided in accordance with Article ~~16~~14.

Article ~~21~~19

Review

The Commission shall review this Directive at the latest by ...* and shall, where appropriate, propose any necessary amendments.

Article ~~22~~20

Penalties

Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive. Member States shall notify those provisions to the Commission by the date specified in Article 24 at the latest and shall notify it without delay of any subsequent amendment affecting them.

~~*{Article 23: deleted}*~~

* 15 years after entry into force.

Article ~~24~~21

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by ... * at the latest. **

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 25

Entry into force

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

* 24 months after entry into force of this Directive.

* Recital: "In accordance with paragraph 34 of the Interinstitutional agreement on better law-making, Member States are encouraged to draw up, for themselves and in the interests of the EU, their own tables, which will, as far as possible, illustrate the correlation between this Directive and the transposition measures and to make them public."

Article 26
Addressees

This Directive is addressed to the Member States.

Done at Brussels,

For the European Parliament
The President

For the Council
The President

<p>SECTION 1</p> <p>INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING SPECIAL PROTECTION FROM EROSION</p>

Soil type (Soil Typological Unit (STU) level)
Soil texture (STU level): sand, silt and clay content
Topography: slope gradient and slope length
Land cover and land cover change (e.g. following Corine Land Cover nomenclature)
Climate: precipitation (amount, duration, frequency and wind characteristics)
Soil density properties (STU level): bulk density and packing density (can be measured or derived)
Soil hydraulic properties (STU level): infiltration rate, permeability and water retention capacity (can be measured or derived)
Total soil organic carbon (g C/kg dry matter) (STU level) (can be measured or derived)
Climate: precipitation (intensity)
Land use, including land management, farming systems and forestry
Hydrological conditions
Agro-ecological zone

<p>SECTION 2</p> <p>INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING SPECIAL PROTECTION FROM SOIL ORGANIC MATTER DECLINE</p>

Soil type (Soil Typological Unit (STU) level)
Total soil organic carbon (g C/kg dry matter) (STU level) (can be measured or derived)
Climate: temperature and precipitation (amount)
Land cover and land cover change (e.g. following Corine Land Cover nomenclature)

⁶ Some of the elements contained in this Annex can be measured or derived, for instance through modelling or the use of pedo-transfer functions, on the basis of known information and measured data.

Soil texture (STU level): clay content
Stock of soil organic carbon (t C/ha) (STU level) (can be measured or derived)
Topography: slope, exposure and elevation
Land use, including land management, farming systems and forestry

<p>SECTION 3</p> <p>INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING SPECIAL PROTECTION FROM COMPACTION</p>
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Soil type (Soil Typological Unit (STU) level)
Topsoil (30 cm or plough layer in arable land) and subsoil texture (STU level)
Climate: temperature, precipitation (distribution) and evapotranspiration
Land cover and land cover change (e.g. following Corine Land Cover nomenclature)
Total soil organic carbon (STU level) (can be measured or derived)
Topsoil and subsoil bulk density (STU level) (can be measured or derived)
Topography: slope and land form
Land use, including land management, farming systems and forestry

SECTION 4

INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING SPECIAL PROTECTION FROM SALINISATION

Soil type (Soil Typological Unit (STU) level)

Soil texture (STU level): sand, silt and clay content

Irrigation areas, chemical properties (pH, nature and content of salts) of irrigated water and type of irrigation techniques

Climate: temperature, precipitation (amount) and evaporation

Soil chemical properties (STU level): pH, electric conductivity and exchangeable sodium percentage

Soil hydraulic properties (STU level): infiltration rate, hydraulic conductivity, water retention and vertical and horizontal drainage characteristics (can be measured or derived)

Groundwater information: chemical properties (pH, nature and content of salts) and depth variation

Parent material: nature and chemical composition

SECTION 5

INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING SPECIAL PROTECTION FROM LANDSLIDES

Soil properties (STU level): texture and permeability (permeability can be measured or derived)

Occurrence/density of existing landslides

Topography: slope length, breaks of slope, nature of slope

Land cover and land cover change (e.g. following Corine Land Cover nomenclature)

Climate: precipitation (amount, duration, frequency and intensity)

Soil type (Soil Typological Unit (STU) level)

Bedrock and overlying deposits (lithology, geotechnical and hydrogeological characteristics, nature of soil parent material) (STU level) (can be measured or derived)

Land use, including land management, farming systems and forestry

Seismic risk

SECTION 6

INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING
SPECIAL PROTECTION FROM ACIDIFICATION

Soil type (Soil Typological Unit (STU) level)
Soil texture (STU level): sand, silt and clay content
Parent material: nature and chemical composition
Soil chemical properties (STU level): pH and Base saturation (can be measured or derived)
Total soil organic carbon (STU level) (can be measured or derived)
Land cover and land cover change (e.g. following Corine Land Cover nomenclature)
Land use, including land management, farming systems and forestry
Climate: temperature, precipitation (amount) and evapotranspiration
Air deposition of acidifying substances

Indicative list of activities which have a significant potential to cause soil contamination referred to in Article 10 ~~and 12~~

1. Establishments where relevant hazardous substances are or were present in quantities equal to or in excess of the amounts indicated in Parts 1 and 2, column 2 of Annex I to Council Directive 96/82/EC (Seveso) *.
2. Sites where activities listed in Annex I ~~to Council Directive 96/61/EC, of the Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions~~ independently of the thresholds specified, take or have taken place, except for the activities carried out by micro-enterprises, as defined in point 3 of Article 2 in the Annex to Commission Recommendation 2003/361/EC **, and except for the activities relative to the rearing of livestock.
3. Areas in airports where use, handling and storage of significant amounts of relevant hazardous substances occurs or has occurred.
4. Land-based areas in ports where use, handling and storage of significant amounts of relevant hazardous substances occurs or has occurred.
5. Areas in former military sites where use, handling and storage of significant amounts of relevant hazardous substances has occurred.
6. Petrol and filling stations.

* OJ L 10, 14.1.1997, p. 13.
* * OJ L 124, 20.5.2003, p. 36.

7. Dry cleaners.
 8. Mining installations, including extractive waste facilities as covered by Directive 2006/21/EC of the European Parliament and of the Council *, but excluding waste facilities for inert waste, peat and unpolluted soil.
 9. Waste landfills as defined in Council Directive 1999/31/EC *□.
 10. Waste water treatment installations.
 11. Pumping stations, transfer points, joints and areas where leaks have been reported of pipelines for the transport of hazardous substances.
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* OJ L 102, 11.4.2006, p. 15.

* * OJ L 182, 16.7.1999, p. 1.

Common Forum proposal for a
DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
establishing a framework for the protection of soil

Chapter I
General provisions

Article 1

Subject-matter and scope

1. This Directive establishes a framework for the protection of soil, its sustainable use and the preservation and, where technically feasible and costs are proportionate to the expected environmental and social benefits, restoration of the capacity of soil to perform as many as possible of the following environmental, economic, social, scientific and cultural functions (whilst taking into account that some functions are mutually exclusive):
 - (a) food and other biomass production, including in agriculture and forestry;
 - (b) storing, filtering and transforming nutrients, substances and water, as well as replenishing bodies of groundwater;
 - (c) basis for life and biodiversity, such as habitats, species and genes;
 - (d) physical and cultural environment for humans and human activities;
 - (e) source of raw materials;
 - (f) acting as carbon reservoir;
 - (g) archive of geological, geomorphological and archaeological heritage.

To that end, it lays down measures for the prevention of soil degradation processes, caused by a wide range of human activities with due account also being taken of natural causes, which significantly adversely affect the capacity of a soil to perform those functions while taking into account that some functions are mutually exclusive. To address such soil degradation processes, it also lays down provisions for establishing measures for the restoration and remediation, including mitigation, of degraded soils to a level of functionality consistent at least with its current or approved future use.

2. This Directive shall apply to soil as defined in Article 2(1), excluding
 - (i) groundwater as defined in Article 2(2) of Directive 2000/60/EC of the European Parliament and of the Council^{*} and as covered by Directive 2006/118/EC of the European Parliament and of the Council^{**},
 - (ii) the seabed, and
 - (iii) soil that forms part of bodies of surface water under Article 2(10) of Directive 2000/60/EC.
3. Member States may decide, if so provided under national law, not to apply this Directive to soil where ongoing activities serving national defence purposes are taking place, if they deem that such application would have an adverse effect on those purposes. Member States shall, however, endeavour to ensure that such activities are conducted in a manner that is compatible, so far as reasonable and practicable, with the objectives of this Directive.

^{*} OJ L 327, 22.12.2000, p. 1.

^{**} OJ L 372, 27.12.2006, p. 19.

Article 2
Definitions

For the purposes of this Directive, the following definitions shall apply:

- (1) "soil" means the top layer of the Earth's crust situated between the bedrock and the surface. The soil is composed of mineral particles, organic matter, water, air and living organisms;
- (2) "sealing" means the permanent covering of the soil surface with an impermeable material⁷;
- (3) "hazardous substances" means substances or mixtures within the meaning of Regulation (EC) No 1272/2008 of the European Parliament and of the Council^{**};
- (4) "contaminated sites" means sites where there is a confirmed presence, caused by human activities, of hazardous substances at such a level that Member States consider that they pose a significant risk to human health or the environment, including groundwater. Such risk is to be assessed taking account of the current or approved future use of the land, all known relevant contaminant pathways and the extent of exposure;
- (5) "remediation" of contaminated sites means actions aimed at the removal, control, containment or reduction of contaminants or exposure pathways so that the site, taking account of its current use or approved future use, no longer poses a significant risk to human health or the environment. Remediation actions may involve monitored natural recovery.
- (6) "soil degradation processes" means:
 - (i) erosion by water or wind⁸;
 - (ii) organic matter decline brought about by a steady downward trend in the organic fraction of the soil, or losses in the volume or stock of organic matter, but excluding undecayed plant and animal residues;⁹

⁷ New Recital to include (cf. soil sealing expert report): covering of soil by buildings, constructions, roads and layers of completely impermeable artificial material (e.g. asphalt and concrete). It is important to note that only part of a settlement area is subject to soil sealing, as gardens and urban parks are not sealed.

^{*} OJ L 353, 31.12.2008, p. 1.

⁸ Coastal erosion is not comprised in this consideration..

⁹ The following new recital will be added: "Soil organic matter includes, where it occurs, peat. The continued extraction of peat, which is permissible in principle as a source of raw

- (iii) compaction through an increase in bulk density and a decrease in soil porosity;
- (iv) salinisation through the accumulation in soil of soluble salts;
- (v) landslides brought about by the down-slope, moderately rapid to rapid movement of masses of earth above the bedrock;
- (vi) acidification by significantly decreasing the soil pH value.

Article 3

Integration

Without prejudice to and where not required by Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment, Member States shall take into account the impacts of sectorial policies on soil degradation processes, where those policies can significantly exacerbate or reduce soil degradation processes in the development of those policies; in particular in areas such as regional and urban spatial planning, transport, energy, agriculture, rural development, forestry, raw material extraction, trade and industry, product and waste policy, tourism, climate change, environment, nature and landscape.

material, may cause a decline in soil organic matter and therefore would have to be assessed against the levels of risk acceptability established by Member States pursuant to this Directive."

Article 4

Precautionary and preventive measures

For the purpose of preserving the soil functions and the sustainable use of soil referred to in Article 1 (1), Member States shall ensure that appropriate and proportionate measures are taken, according to national or regional circumstances:

- (a) to prevent or minimise adverse effects from actions that Member States consider are likely to cause degradation processes that hamper significantly any of the soil functions referred to in Article 1(1);
- (b) to limit the intentional or unintentional introduction of hazardous substances that Member States consider relevant in order to avoid the accumulation of those hazardous substances on or in the soil that would significantly hamper soil functions or give rise to significant risks to human health or the environment, excluding those due to long-range air deposition and those due to a natural phenomenon of exceptional, inevitable and irresistible character;
- (c) to prevent or, if not possible, minimise the intentional and unintentional introduction of hazardous substances that Member States consider relevant on or in the soil by dumping, leaking or spilling.

For the purpose of this Article, Member States may use their existing national, regional and local measures and programmes already set up under national or Union legislation or international agreements as well as voluntary measures.

Article 5

Sealing

For the purpose of preserving the soil functions and the sustainable use of soil referred to in Article 1(1), taking into account relevant environmental, social and economic benefits from sealing, Member States shall [...] take appropriate and proportionate measures, where necessary, to contain [...] soil sealing and, where soil sealing is to be carried out, to mitigate its effects [...].

Chapter II

Soil Degradation Processes

SECTION ONE

IDENTIFICATION OF PRIORITY AREAS

Article 6

Identification of priority areas requiring special protection from soil degradation processes

1. Member States shall identify priority areas on their national territory, and at the administrative level that they consider appropriate, requiring special protection against soil degradation processes defined in Article 2(7).
2. By ...*, Member States shall identify the soil degradation processes which are of relevance and significance for their territory or part of their territory. For such degradation processes, Member States shall, at the administrative level and geographical scale that they consider appropriate:
 - (a) evaluate, based on but not restricted to the indicative elements listed in Annex I, the extent to which their national territory is vulnerable to such degradation processes;¹⁰
 - (b) establish the methodology and criteria by which they shall identify priority areas, taking at least into account the vulnerability as established under point (a), the objective of preserving soil functions pursuant to Article 1(1) and the sustainable use of soil and land which can vary from area to area and within an area;¹¹
 - (c) identify priority areas on their national territory using the methodology and criteria established in paragraph 2(b).

* 7 years after entry into force.

¹⁰ Insertion in a recital or addition in the definitions of Article 2 what is meant by “vulnerable area”: “vulnerable area” means a defined geographical area which is likely to be significantly subject to a particular soil degradation process based on inherent characteristics.

¹¹ Insertion in the recital that other criteria can relate to technical, scientific, social and economical aspects.

3. For the purpose of the evaluation carried out under paragraph 2(a), Member States may base the identification of the vulnerability of areas on empirical evidence or validated models. Where appropriate existing data, including maps and research, may be used.
4. For the purpose of paragraphs 2(b) and 2(c), Member States shall take into account, as far as relevant and feasible, the effects of those processes on greenhouse gas emissions, desertification and soil biodiversity loss.
5. The priority areas identified pursuant to paragraph 2(c), shall be made public and updated at least every ten years recognizing that the methodology and criteria could be updated.
6. Where, on the basis of the physical and climate characteristics of its territory, a Member State considers that one or more of the soil degradation processes are not occurring or will not be likely to occur in the near future in its territory or part of its territory at a level considered relevant with regard to the preservation of the soil functions pursuant to Article 1(1) and the sustainable use of soil, it shall notify the Commission thereof within four years after entry into force of this Directive.
7. Member States shall designate the competent authorities to be responsible for the identification of priority areas.

SECTION TWO
ESTABLISHMENT OF TARGETS AND ACTION PROGRAMMES

Article 7

Action programmes to combat soil degradation processes

1. For the purpose of preserving or, where technically feasible and costs are proportionate to the expected environmental and social benefits, restoring the soil functions and ensuring the sustainable use of soil referred to in Article 1 (1), Member States shall, in respect of the priority areas identified in accordance with Article 6, draw up, at the administrative level and geographical scale that they consider appropriate, an action programme including at least:
 - a. appropriate and proportionate measures to prevent or reduce soil degradation processes;
 - b. targets and timetable for the uptake and the implementation of those measures;¹²
 - c. an estimate of the allocation of financial resources for their implementation.

Such programmes may use existing national, regional and local measures and programmes already set up under national or Community legislation or international agreements as well as voluntary measures. The action programmes may include statutory, administrative or contractual measures.

¹² Inclusion in the recital that targets can be quantitative and/or qualitative, they can relate to prevention, mitigation, adaptation or restoration measures, to the level of uptake of the measures, and they can differ from area to area, from a land use or a soil threat to another.

2. When drawing up and revising the various elements of the action programmes pursuant to paragraph 1, Member States shall give due consideration to the social and economic impacts, cost-effectiveness and technical feasibility of the measures envisaged as well as enhance coherence with existing national, regional and local measures and programmes, in particular those taken in the context of cross-compliance and rural development within the CAP.

Member States shall indicate in their action programmes how the measures are to be implemented and how they will contribute to the prevention or reduction of soil degradation processes.

3. Where an area is identified as requiring special protection from different concurrent soil degradation processes, Member States may adopt a single programme in which appropriate and proportionate measures are taken for all the degradation processes identified.
4. The action programme shall be drawn up by ... * and shall be in application no later than by ... **

The action programme shall be made public and shall be updated at least every five years and reviewed at least every ten years.

* 9 years after entry into force. RO: 10 years.

** 10 years after entry into force. RO: 12 years.

CHAPTER III
SOIL CONTAMINATION

SECTION ONE
IDENTIFICATION AND INVENTORY

Article 8

Identification of priority sites to be investigated

1. Member States shall identify priority sites on their national territory, at the administrative level that the Member State considers appropriate, which will be made subject to site specific investigation in accordance with the procedure described in Article 9.
2. Within 2 years from [transposition date] Member States shall adopt the method and criteria by which they shall establish whether a site should be considered to be a priority site. Member States shall publish the method and criteria.
3. The method and criteria required by paragraph 2 shall, as a minimum, include an initial consideration of:
 - a. Whether or not potentially soil-contaminating activities are likely to have taken place on sites (currently or in the past), taking into consideration the activities listed in the indicative Annex II;
 - b. The current use of the site, and the likelihood that significant risks may exist, having particular regard to sensitive uses, presence of receptors, and types of hazardous substance;
 - c. Whether the site has already been assessed for contamination and the findings of such assessment, or whether it has already been remediated.
4. Within seven years from [transposition date], Member States shall compile and publish a register of priority sites for investigation, hereinafter the register. The register should continue to evolve over time and will be updated and published accordingly. Member States shall add sites to their register if new priority sites are found, for example if new evidence comes to light that a site poses a greater risk than previously thought. Member States may remove sites

from their register if they have ceased to be priority sites (e.g. because they no longer pose a significant risk, or if new evidence comes to light that they pose a lesser risk than previously thought).

5. Member States may define a strategy for other potentially contaminated sites not included in the register of priority sites for investigation.

(Recital: article 10.5 is intended to recognize that some sites in their current use may not pose sufficient risks to be placed in the register of priority sites at the current state of information. They might become a problem if the land use is changing for a more sensitive use or will lead to site conditions creating unacceptable risks and if there is no strategy for dealing with that. Therefore Member states should record the history of the sites, the results of investigation, the remediation works done and /or the level of risks taken into consideration for assessing sites. Also for remediated sites there is the possibility to gain a significant risk in the future)

Article 9

Investigation strategy and inventory of contaminated sites

1. Member States shall ensure that an investigation procedure is conducted on the sites mentioned in the register of priority sites for investigation established in Article 8 (4). The investigation procedure conducted on a site must allow the competent authority to conclude whether or not the site is a contaminated site.
2. For the purpose of Article 9 (1), Member States shall ensure, if they have not already done so, that:
 - a) An assessment is made of: (i) the existing information on present and past activities on the site, in particular as regards to the handling, use and storage of relevant hazardous substances over time, and any evidence of accidents involving the emission of such substances; and (ii) the presence of human or environmental receptors that could suffer from any contamination, taking into account all known relevant contaminant pathways.
 - b) An assessment is made of concentration levels of relevant hazardous substances linked to the activities carried out on the site, for any site where the Member State

considers that the assessment carried out under point (a) indicates that there is a significant probability of a site posing a significant risk to human health or the environment. For that purpose, Member States shall establish the methodology necessary for determining those concentration levels.

c) A risk assessment is carried out for any site where the Member State considers having taken account of the assessments made under sub-paragraphs (a) en (b), that there are sufficient reasons to believe that the site may pose a significant risk to human health or the environment, including groundwater.

Member States may determine that a site is a contaminated site on the basis of the outcomes of either paragraph 2 (a), (b) or (c). Moreover, in the course of the identification process, Member States may proceed directly to the identification steps set out in paragraph 2(b) or (c) to determine whether a site is a contaminated site.

If the assessments carried out pursuant to either paragraph 2(a) or (b) have not concluded that there is a significant probability that a site is a contaminated site, Member States are not required to investigate further that site. Where additional information is obtained which the Member State considers has the potential to result in a material change in the contamination status of a site, a revised site-specific assessment shall be carried out in accordance with the specific investigation procedure described in sub-paragraphs (a) to (c) above.

3. Member States shall establish an inventory or inventories of contaminated sites covering the whole of their national territory, and at the administrative level that the Member State considers appropriate, hereinafter the inventory. The inventory shall be made public five years after the publication of the register of priority sites established in accordance to Article 8(4), The inventory should continue to evolve over time and will be updated and published accordingly, f.e. when new contaminated sites that have been identified.
4. When updating this inventory of contaminated sites, Member States may exclude the sites which are no longer contaminated sites. MS should maintain records of the history of actions taken on the sites that have been removed from the inventory.
5. Member States may add other contaminated sites to their inventories if they are identified through other means, f.e. Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions.

6. Member States shall designate the competent authorities to be responsible for the identification of contaminated sites.

Article 10

Soil status report

1. From seven years after [transposition date], on a site included in the register, established in art. 8(4), Member States shall ensure that a soil status report is made available to the relevant authority:
 - by the owner of that site or the prospective buyer when the site is sold, making it also available to the other party in the transaction, and
 - by the owner of that site or a relevant third party when there are changes in the type of land use, including land development, which the Member State considers relevant.

Member States may also decide that soil status report is required for sites:

- removed from the register,
 - in the inventory or removed from the inventory, and
 - on other potentially contaminated sites of concern identified according to art.8 (6)
2. Without prejudice to Community and national liability regimes, the soil status report shall be issued by a body or person authorised by the Member State. Member States shall decide on the information that must be included in the soil status report which may vary according to the use of the land, the size of a proposed development or any other relevant factors. It shall include at least existing and readily available information from the register or inventory, information on the contamination status of the land, the history of that status, if the site is included in the register or the inventory, if the site has been excluded of the register or inventory and for which reason.

[If the soil status report states that the site is part of the register and that the investigation procedure according to Art. 9.2 has not been conducted, the Member State shall/may ensure that the owner of that site, or a relevant third party, shall conduct an investigation procedure in accordance with Article 9.2.]

3. Member States may establish a period of validity for the soil status report that they consider appropriate. During such a period, the same report can be made available for successive transactions, provided that there have not been other changes which could influence the state of the soil in a way that could change the contamination status of the land, taking into account the intended land use.

SECTION TWO

REMEDIATION

Article 11

Remediation

1. Member States shall ensure that the contaminated sites listed in their inventories of contaminated sites, pursuant to Article 9(3), are remediated.

Without prejudice to the strategy drawn up pursuant to Article 12, Member States may require immediate remediation for any contaminated site and shall also ensure that, where imminent threats to human health or the environment exist, temporary and urgent measures are taken to limit or to prevent further adverse effects.

2. When deciding on the remediation actions, Member States shall give due consideration to social, economic and environmental impacts and benefits, cost-effectiveness and technical feasibility of the actions envisaged. In the case of proven significant risks to water resources, remediation objectives shall be established taking into consideration relevant EU water legislation.

If the means required for remediation are not technically available, or represent a disproportionate cost with respect to expected environmental benefits, sites may be conditioned in such a way that they do not pose any significant risk to human health or the environment.

3. Member States may change the approved land use of a site to a less sensitive use, provided it will not pose any significant risk to human health or the environment.

4. Where containment, restriction of access or land use change are applied, the evolution of the risk to human health or the environment shall be monitored.
5. If not already established, and having regard to paragraph 2, Member States shall set up appropriate mechanisms ensuring the identification of (a) those in charge of the site remediation, and (b) those responsible for bearing the costs of remediation, without prejudice to and where not required by Directive 2004/35/EG of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remediation of environmental damage.
6. Member States shall set up appropriate economic mechanisms to provide for the investigation and the remediation of the contaminated sites for which, the natural or legal person responsible for the contamination cannot be identified or cannot be held liable under EU or national legislation or may not be made to bear the costs of the investigation and the remediation.
7. Where, Member States fund the investigation or the remediation, they shall, where they consider appropriate, endeavour to recover the costs they have incurred in relation to the investigation or remedial measures taken pursuant to this Directive.

Article 12

Remediation strategy

1. Member States shall, on the basis of the inventory and by ...^{*}, draw up a remediation strategy or strategies covering the whole of their national territory, including at least remediation targets, a prioritisation, taking particular account of the scale of the risks to human health or the environment, and the timescale over which they might become manifest, an estimation of the financial resources that may be needed for implementation, and the likely sources of this funding.
2. The remediation strategy shall be in application and made public by ...^{**}. Member States shall review their strategies at least every five years.

^{*} 9 years after entry into force.

^{**} 10 years after entry into force.

Chapter IV

Awareness raising, reporting and exchange of information

Article 13

Awareness raising

Member States shall take appropriate measures to raise awareness about the importance of soil for human, biodiversity and ecosystem survival, of preventive measures for preserving soil functions, to promote the transfer of knowledge and experience for a sustainable use of soil.

Article 13a

Public participation

1. For the purposes of this Article, "the public" shall mean one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups.
2. Member States shall ensure that the public is given early and effective opportunities to participate in the preparation, modification and review of the action programmes referred to in Article 7, and the remediation strategies referred to in Article 12.

To that end, Member States shall ensure that:

- a. the public is informed, whether by public notices or other appropriate means such as electronic media where available, about any proposals for these action programmes and remediation strategies or for their modification or review and that relevant information about such proposals is made available to the public including inter alia information about the right to participate in decision-making and about the competent authority to which comments or questions may be submitted;

- b. the public is entitled to express comments and opinions when all options are open before decisions on the action programmes and remediation strategies are made;
- c. in making those decisions, due account shall be taken of the results of public participation;
- d. having examined the comments and opinions expressed by the public, the competent authority makes reasonable efforts to inform the public about the decisions taken and the reasons and considerations upon which those decisions are based, including information about the public participation process.

3. Member States shall identify the public entitled to participate for the purposes of paragraph 2, including relevant non-governmental organisations meeting any requirements imposed under national law, such as those promoting environmental protection.

The detailed arrangements for public participation under this Article shall be determined by the Member States so as to enable the public to prepare and participate effectively.

Reasonable time-frames shall be provided allowing sufficient time for each of the different stages of public participation required by this Article.

4. This Article shall not apply to action programmes and remediation strategies for which a public participation procedure is carried out under Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment. *

* OJ L 197, 21.7.2001, p. 30.

Article 14
Reporting

1. Member States shall indicate to the Commission by ... and every five years thereafter, how the following information to be made publicly available pursuant to this Directive can be accessed:
 - (a) the priority areas identified pursuant to Article 6(2)(c);
 - (b) the action programmes drawn up pursuant to Article 7(1);
 - (c) the register of priority sites established pursuant to Article 8.4;
 - (d) the inventory of contaminated sites established pursuant to Article 9(3);
 - (e) the remediation strategy or strategies adopted pursuant to Article 12(1);

2. Furthermore, Member States shall make the following information available to the Commission in an electronic format by ..., and every five years thereafter:
 - (a) a summary of the measures taken pursuant to Article 5;
 - (b) the methodology used for identifying priority areas pursuant to Article 6(3);
 - (c) a summary containing the number of sites referred to in Article 8(4) at the appropriate administrative level and specified by type of activity as well as the number of the sites fully investigated pursuant to Article 9.2 during the reporting period;
 - (d) metadata on priority areas identified pursuant to Article 6(2)(c) as documented digital georeferenced data in a format that can be read by a geographic information system (GIS) in accordance with Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) *;
 - (e) a summary of the measures taken pursuant to Article 13.

* OJ L 108, 25.4.2007, p. 1.

Article 15

Exchange of information

By...^{*□}, the Commission shall set up a platform for the exchange of information between Member States and with stakeholders on the implementation of this Directive, particularly best practice for soil protection and remediation, the priority area identification pursuant to Article 6, on risk assessment methodologies for contaminated sites currently in use or under development and on economic mechanisms.

* 1 year after entry into force.

Chapter V

Final provisions

Article 16

Implementation and adaptation to technical progress

1. In order to allow the provisions of this Directive to be adapted to technical and scientific progress, the Commission shall adopt delegated acts in accordance with Article 16a as regards the adaptation of Annexes I and II to such scientific and technical progress.
2. Where, on the basis of the exchange of information referred to in Article 15, a need for increased coherence is identified, the Commission shall adopt delegated acts in accordance with Article 16a as regards common technical elements for soil contamination risk assessment, not having any bearing on the risk acceptability.
3. By ...^{*□}, the necessary provisions on data and metadata quality, utilisation of historical data, methods, access, and data-exchange formats for the implementation of the provisions of Article 14 shall be adopted in accordance with the regulatory procedure referred to in Article 17(2).

Article 16a

Exercise of the delegation

1. The powers to adopt the delegated acts referred to in Article 16 shall be conferred on the Commission for a period of [7] years following the entry into force of this Directive. The Commission shall make a report in respect of the delegated powers at the latest 6 months before the end of the [7] year period. The delegation of power shall be automatically extended for periods of an identical duration, unless the European Parliament or the Council revokes it in accordance with Article 16b.
2. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

* 4 years after entry into force.

3. The powers to adopt delegated acts are conferred on the Commission subject to the conditions laid down in Articles 16b and 16c.

Article 16b

Revocation of the delegation

1. The delegation of power referred to in Article 16a may be revoked by the European Parliament or by the Council.
2. The institution which has commenced an internal procedure for deciding whether to revoke the delegation of power shall inform the other legislator and the Commission at the latest one month before the final decision is taken, stating the delegated powers which could be subject to revocation and the reasons for a revocation.
3. The decision of revocation shall put an end to the delegation of the powers specified in that decision. It shall take effect immediately or at a later date specified therein. It shall not affect the validity of the delegated acts already in force. It shall be published in the Official Journal of the European Union.

Article 16c

Objections to delegated acts

1. The European Parliament and/or the Council may object to the delegated act within a period of three months from the date of notification.
2. If, on expiry of that period, neither the European Parliament nor the Council has objected to the delegated act, or if, before that date, the European Parliament and the Council have both informed the Commission that they have decided not to raise objections, the delegated act shall enter into force at the date stated in its provisions.
3. If the European Parliament or the Council objects to the adopted delegated act, it shall not enter into force. The institution which objects shall state the reasons for objecting to the delegated act.

Article 17

Committee

1. The Commission shall be assisted by a committee, hereinafter “the Committee”.
2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.

Article 18

Commission report

1. The Commission shall publish a first evaluation report on the implementation of this Directive within two years of receiving the action programmes and remediation strategies.

The Commission shall publish further reports every five years thereafter.

It shall submit the reports to the European Parliament and to the Council.

2. The reports provided for in paragraph 1 shall include a review of progress in the implementation of this Directive based on an assessment by the Commission based on information provided in accordance with Article 14.

Article 19

Review

The Commission shall review this Directive at the latest by ...* and shall, where appropriate, propose any necessary amendments.

Article 20

Penalties

Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive.

Member States shall notify those provisions to the Commission by the date specified in Article 24 at the latest and shall notify it without delay of any subsequent amendment affecting them.

Article 21

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by ...* at the latest.**

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 22

Entry into force

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Article 26

Addressees

This Directive is addressed to the Member States.

Done at Brussels,

For the European Parliament

The President

For the Council

The President

* 15 years after entry into force.

* 24 months after entry into force of this Directive.

** Recital: "In accordance with paragraph 34 of the Interinstitutional agreement on better law-making, Member States are encouraged to draw up, for themselves and in the interests of the EU, their own tables, which will, as far as possible, illustrate the correlation between this

Directive and the transposition measures and to make them public."

SECTION 1

**INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING
SPECIAL PROTECTION FROM EROSION**

Soil type (Soil Typological Unit (STU) level)
Soil texture (STU level): sand, silt and clay content
Topography: slope gradient and slope length
Land cover and land cover change (e.g. following Corine Land Cover nomenclature)
Climate: precipitation (amount, duration, frequency and wind characteristics)
Soil density properties (STU level): bulk density and packing density (can be measured or derived)
Soil hydraulic properties (STU level): infiltration rate, permeability and water retention capacity (can be measured or derived)
Total soil organic carbon (g C/kg dry matter) (STU level) (can be measured or derived)
Climate: precipitation (intensity)
Land use, including land management, farming systems and forestry
Hydrological conditions
Agro-ecological zone

SECTION 2

**INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING
SPECIAL PROTECTION FROM SOIL ORGANIC MATTER DECLINE**

Soil type (Soil Typological Unit (STU) level)
Total soil organic carbon (g C/kg dry matter) (STU level) (can be measured or derived)
Climate: temperature and precipitation (amount)
Land cover and land cover change (e.g. following Corine Land Cover nomenclature)
Soil texture (STU level): clay content
Stock of soil organic carbon (t C/ha) (STU level) (can be measured or derived)

Topography: slope, exposure and elevation
Land use, including land management, farming systems and forestry

<p>SECTION 3</p> <p>INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING SPECIAL PROTECTION FROM COMPACTION</p>
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Soil type (Soil Typological Unit (STU) level)
Topsoil (30 cm or plough layer in arable land) and subsoil texture (STU level)
Climate: temperature, precipitation (distribution) and evapotranspiration
Land cover and land cover change (e.g. following Corine Land Cover nomenclature)
Total soil organic carbon (STU level) (can be measured or derived)
Topsoil and subsoil bulk density (STU level) (can be measured or derived)
Topography: slope and land form
Land use, including land management, farming systems and forestry

SECTION 4

INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING SPECIAL PROTECTION FROM SALINISATION

Soil type (Soil Typological Unit (STU) level)

Soil texture (STU level): sand, silt and clay content

Irrigation areas, chemical properties (pH, nature and content of salts) of irrigated water and type of irrigation techniques

Climate: temperature, precipitation (amount) and evaporation

Soil chemical properties (STU level): pH, electric conductivity and exchangeable sodium percentage

Soil hydraulic properties (STU level): infiltration rate, hydraulic conductivity, water retention and vertical and horizontal drainage characteristics (can be measured or derived)

Groundwater information: chemical properties (pH, nature and content of salts) and depth variation

Parent material: nature and chemical composition

SECTION 5

INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING SPECIAL PROTECTION FROM LANDSLIDES

Soil properties (STU level): texture and permeability (permeability can be measured or derived)

Occurrence/density of existing landslides

Topography: slope length, breaks of slope, nature of slope

Land cover and land cover change (e.g. following Corine Land Cover nomenclature)

Climate: precipitation (amount, duration, frequency and intensity)

Soil type (Soil Typological Unit (STU) level)

Bedrock and overlaying deposits (lithology, geotechnical and hydrogeological characteristics, nature of soil parent material) (STU level) (can be measured or derived)

Land use, including land management, farming systems and forestry

Seismic risk

SECTION 6

INDICATIVE ELEMENTS FOR THE IDENTIFICATION OF AREAS REQUIRING
SPECIAL PROTECTION FROM ACIDIFICATION

Soil type (Soil Typological Unit (STU) level)
Soil texture (STU level): sand, silt and clay content
Parent material: nature and chemical composition
Soil chemical properties (STU level): pH and Base saturation (can be measured or derived)
Total soil organic carbon (STU level) (can be measured or derived)
Land cover and land cover change (e.g. following Corine Land Cover nomenclature)
Land use, including land management, farming systems and forestry
Climate: temperature, precipitation (amount) and evapotranspiration
Air deposition of acidifying substances

Indicative list of activities which have a significant potential to cause soil contamination referred to in Article 10

1. Establishments where relevant hazardous substances are or were present in quantities equal to or in excess of the amounts indicated in Parts 1 and 2, column 2 of Annex I to Council Directive 96/82/EC (Seveso) *.
2. Sites where activities listed in Annex I of the Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions independently of the thresholds specified, take or have taken place, except for the activities carried out by micro-enterprises, as defined in point 3 of Article 2 in the Annex to Commission Recommendation 2003/361/EC **, and except for the activities relative to the rearing of livestock.
3. Areas in airports where use, handling and storage of significant amounts of relevant hazardous substances occurs or has occurred.
4. Land-based areas in ports where use, handling and storage of significant amounts of relevant hazardous substances occurs or has occurred.
5. Areas in former military sites where use, handling and storage of significant amounts of relevant hazardous substances has occurred.
6. Petrol and filling stations.
7. Dry cleaners.

* OJ L 10, 14.1.1997, p. 13.
* * OJ L 124, 20.5.2003, p. 36.

8. Mining installations, including extractive waste facilities as covered by Directive 2006/21/EC* of the European Parliament and of the Council, but excluding waste facilities for inert waste, peat and unpolluted soil.
 9. Waste landfills as defined in Council Directive 1999/31/EC**□.
 10. Waste water treatment installations.
 11. Pumping stations, transfer points, joints and areas where leaks have been reported of pipelines for the transport of hazardous substances.
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* OJ L 102, 11.4.2006, p. 15.
* * OJ L 182, 16.7.1999, p. 1.