

***Short statements about the contaminated land  
part of the proposed Soil Framework Directive***

*First DRAFT*



## About this document

The COMMON FORUM agenda committee came up with the idea to prepare a document with short statements about the contaminated land part of the proposed Soil Framework Directive (SFD). The document is not intended to become a common position paper, but is intended to help those of us who have to prepare national positions to choose the best arguments to suit their needs and to be aware of arguments that may be used by others. The document will discuss each article of the SFD dealing with contaminated land management under four headings:

- A] The article implies.....
- B] The article does not imply.....
- C] Scientific comments
- D] Consequences for current practice in the member states

What is described under headings A and B aims at clarifying what the articles of the soil SFD are actually demanding from the Member States. Perceptions and (un)justified extrapolations have already been confusing the discussions and these parts of the document will try to set things straight. I have to mention that the statements under A and B are sometimes strict logical deductions from the text of the articles in the SFD and may not reflect the intentions of the commission. If so it may be a good idea to propose certain changes in the text of the directive.

Scientific comments (heading C) raise some issues concerning the technical feasibility of certain articles, which can not be easily labeled as "practical consequence" but may be relevant for the discussion.

Entries under heading D will identify the consequences for practical contaminated land management based on the experience of COMMON FORUM members. This part of the document really needs to be built up from input from COMMON FORUM members, by email before the next meeting in Stuttgart and during the discussion at the meeting.

The current (draft) version is only a starting point and all readers are invited to add statements under the four headings. Practical consequences of the proposed SFD will be widely different depending on the situation in the Member States (starters vs. countries with 25 year experience, centralized vs. decentralized policies, level of integration with spatial planning, urban development, water management and wider socio-economic issues like regional development). This means that certain statements will be only valid in some Member States and not in all. Nevertheless a "collective thinking" exercise may improve and focus all possible positions.

As said before the COMMON FORUM paper will only deal with the articles relevant for contaminated land management. One should also realize that for all soil threats addressed in the directive there is room for specific national implementation. The directive only provides a general framework. As stated in article 26 "This Directive is addressed to the Member States." This means that the practical consequences of the directive for contaminated land management in the various EU countries also depend on the way the directive will be implemented at the national level. To keep the distinction between SFD text and comments "times 12" is used for SFD text.

# Implications, scientific comments and practical consequences for each relevant SFD article

## *Article 2* *Definitions*

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

- (2) ‘dangerous substances’ means substances or preparations within the meaning of Council Directive 67/548/EC<sup>1</sup> and Directive 1999/45/EC of the European Parliament and of the Council<sup>2</sup>.

### **A] Does imply:**

- That every substance and preparation which is regarded as ‘dangerous substance’ in EU can be a soil contaminating substance if it is present in soil as result of human activities. This of course depends on the level that Member States consider in view of significant risk to human health or the environment. (see article 10 -1)

### **B] Does not imply:**

- That every substance falling under the broad EU definition should be subject of soil quality investigations and site specific risk assessment everywhere. Risk assessment can still be restricted to those substances which – depending on the type of soil contaminating activity- contribute most to the risk for human health and the environment and are the key problems to be addressed in risk based solutions.

### **C] Scientific comment:**

- What are the most important substances leading to soil pollution by “Annex II” and other relevant activities? To keep the number of substances to be investigated and subject to risk assessment practical it is necessary to exchange information about practical experiences in EU. Experienced countries have good practice in what to investigate at what type of polluting activities, which they may want to share with others.

### **D] Practical consequences:**

- Experienced Member States have to review their procedures for selecting soil contaminating substances for site specific risk assessment. Member States that have to formulate a contaminated land policy in view of the SFD have to design a policy for addressing the relevant substances in each case.

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<sup>1</sup> OJ L 196, 16.8.1967, p. 1.  
<sup>2</sup> OJ L 200, 30.7.1999, p. 1.

*Article 10*  
*Inventory of contaminated sites*

1. Member States shall, in accordance with the procedure laid down in Article 11, identify the sites in their national territory where there is a confirmed presence, caused by man, of dangerous substances of such a level that Member States consider they pose a significant risk to human health or the environment, hereinafter “contaminated sites”.

That risk shall be evaluated taking into account current and approved future use of the land.

2. Member States shall establish a national inventory of contaminated sites, hereinafter “the inventory”. The inventory shall be made public and reviewed at least every five years.

**A] Does imply:**

- Each memberstate should start an inventory or complete their existing inventory or aggregate regional and local inventories to obtain a national inventory of contaminated sites.
- Contaminated sites are sites that pose a significant risk to human health or the environment, as related to their current and approved future use. If current use is safe but approved future use is posing significant risk the site is to be considered contaminated. If the site is posing risk taking into account current use but will no longer pose significant risk with approved future use the site is also to be considered as contaminated.
- Member States are responsible for the development of decision making criteria for the assessment of soil contamination leading to significant risk in relation to current or approved future use.

**B] Does not imply:**

- “Confirmed presence, caused by man, of dangerous substances” does not by itself imply actual soil sampling and analysis of contaminant levels, although article 11 does restrict confirmation to “measurement”. Article 12 mentions “determination by chemical analyses”.
- The article does not imply EU wide soil trigger values or acceptable risk levels for human health and the environment.
- A national inventory does not imply that such an inventory may not consist of individual regional or local inventories.
- Inventories are public but the decision to consider a site as contaminated need not to be subject to public debate.
- The review of the inventory in 5 years does not imply that the inventory is to be completed within 5 years. “Review” does not imply a “revision” of the process leading to the inventory (some translations of the SFD do imply a revision instead of a review)

**C] Scientific comment:**

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**D] Practical consequences:**

- Linking the definition of contaminated sites to risk for current and approved future use does require Member States to have a land use register and a land use planning system.
- Many existing inventories are considering “potentially” contaminated sites and will need further assessments to yield an inventory of contaminated sites
- Public inventories listing sites that are contaminated but not immediately remediated may have economic side effects (land value).

*Article 11*  
*Identification procedure*

1. Each Member State shall designate a competent authority to be responsible for the identification of contaminated sites.
2. Within five years from [transposition date], the competent authorities shall have identified the location of at least the sites where the potentially soil-polluting activities referred to in Annex II are taking place or have taken place in the past.

For those purposes, the activities referred to in point 2 of Annex II shall be considered independently of the thresholds specified in Annex I to Council Directive 96/61/EC<sup>3</sup>, 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<sup>4</sup>, and those relative to the rearing of livestock.

The identification shall be reviewed at regular intervals.

3. In accordance with the following time-table, the competent authorities shall measure the concentration levels of dangerous substances in the sites identified in accordance with paragraph 2, and where the levels are such that there may be sufficient reasons to believe that they pose a significant risk to human health or the environment, an on-site risk assessment shall be carried out in relation to those sites:
  - (a) within five years from [transposition date], for at least 10% of the sites;
  - (b) within 15 years from [transposition date], for at least 60% of the sites;
  - (c) within 25 years from [transposition date], for the remaining sites.

**A] Does imply:**

- Member States (or the competent authorities they have appointed) should have completed their inventory within 25 years, by using a stepwise systematic approach. First step is locating the sites where activities listed in Annex II have taken place. The second step is “measuring” the concentration levels and the third step (which may follow step 2 immediately) is a site specific risk assessment if the degree of contamination gives sufficient reasons to believe that there is a significant risk for human health and the environment.
- The competent authorities seem to be responsible for all soil investigation. There has been discussion whether this also implies that all investigations should be paid by the authorities. (Representatives from the commission already pointed out that this was not their intention)

**B] Does not imply:**

- The article does not imply that there is only one competent authority per Member State.
- Because inventories have to be reviewed every 5 year the inventory described do not need to be complete in the strict sense of this word. One should probably read “ as complete as feasible”.

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<sup>3</sup> OJ L 257, 10.10.1996, p. 26.

<sup>4</sup> OJ L 124, 20.5.2003, p. 36.

- The article does not imply that one should first establish a complete inventory of “Annex II locations” before starting further assessments of individual sites. The requirement that at least 10% of the identified “Annex II locations” have to be further assessed within 5 years after [transposition] points in the same direction. In any case paragraph 3 a of the article cannot refer to a complete inventory of “Annex II locations” since Member States are allowed to use five years for making this inventory. So the percentage of sites implied under 3 a b and c must refer to the sites as far as “identified in accordance with paragraph 2”.
- The article does not imply that all dangerous substances have to be “measured”. In view of the risks as defined in the directive only those introduced by human activities, (at least) listed in Annex II, may be relevant. By stating this explicitly in article 12 about the soil status report some questions may be raised whether the “measurement of concentration levels” required in article 11 (this article) are intended to be different from or more complete than the one described in article 12.
- The article does not imply (at least this is unclear) that concentrations of contaminants giving sufficient reasons to believe that they pose a significant risk to human health or the environment are also referring the approved future use. This is only mentioned for risk evaluation in article 10 paragraph one and not for the decision to start a risk evaluation.

### **C] Scientific comment:**

- It is not possible to measure the concentration levels of dangerous substances in the sites. One can measure concentrations of substances in small volumes of extracts of soil from soil samples with reasonable precision and accuracy (low measurement errors) but the variability of the results from different soil samples will be substantial, as soil is generally quite heterogeneous. This heterogeneity cannot be reduced by taking more samples. More samples only improve the reliability of estimates of the average concentration in a given volume of soil, which often need to be extrapolated to the larger spatial scales relevant for exposure. In short we will never have “measurements” only “estimates”. These estimates may be used to “confirm the presence” (see article 10) but in general other evidence like the history of the site and experience with similar sites should be used as well. Sometimes the other lines of evidence are even better “predictors” of contamination than chemical analyses of a few soil samples.
- The assessment of soil contamination in the directive is risk based but does not really exploit the flexibility of risk assessment. If risk assessment is used in decision making there would be no further assessment if a competent authority has sufficient reasons to believe that the level of contamination poses a significant risk to human health or the environment. A real risk assessor would only go for an in depth on-site risk assessment if he has some concerns but NOT sufficient reasons to believe that the level of contamination poses a significant risk to human health or the environment.
- A suggestion to adapt the first part of the text of Article 11-3: the competent authorities shall determine the presence of dangerous substances in the sites identified in accordance with paragraph 2, and where the amount of contamination is such that there may be reasons to believe that the contamination may pose a significant risk to human health or the environment, an on-site risk assessment shall be carried out in relation to those sites.
- Contaminant levels or concentrations of contaminants in soil play an important role in this article since they are used to trigger a site specific risk assessment. However concentrations alone may not be sufficient reasons to believe that they pose a significant risk to human health or the environment. Many other factors (soil type, geohydrology, landuse, vegetation and so on) have to be taken into account. If one chooses to ignore those other factors and only want to address them in site specific risk assessment, the trigger will become quite conservative which means many on site risk assessments with many “no risk” conclusions. If one chooses to use a more complex but still simplified risk assessment than there will be less elaborate on site risk assessments and one may save costs for investigations, but on the other hand one cannot use the simple trigger of (estimated)“concentration level”.

**D] Practical consequences:**

- Member States have been using various identification procedures to draw up inventories. Although in the end the decision to remediate a site is based on risk in view of current or approved future use in most countries, the process leading to this decision can be quite different. Some reworking of existing inventories will be required.
- As Annex II is listing quite broad and not sharply defined categories of activities on soil, it need to be specified by the competent authorities which have to put this list into practice.
- Some trigger values (for starting an on site risk assessment) need to be developed (by competent authorities or Member States) to asses whether contaminant levels are such that there may be sufficient reasons to believe that they pose a significant risk to human health or the environment.
- On site risk assessment protocols have to be developed if not yet available.

*Article 12*  
*Soil status report*

1. Where a site is to be sold on which a potentially polluting activity listed in Annex II is taking place, or for which the official records, such as national registers, show that it has taken place, Member States shall ensure that the owner of that site or the prospective buyer makes a soil status report available to the competent authority referred to in Article 11 and to the other party in the transaction.
2. The soil status report shall be issued by an authorised body or person appointed by the Member State. It shall include at least the following details:
  - (a) the background history of the site, as available from official records;
  - (b) a chemical analysis determining the concentration levels of the dangerous substances in the soil, limited to those substances that are linked to the potentially polluting activity on the site;
  - (c) the concentration levels at which there are sufficient reasons to believe that the dangerous substances concerned pose a significant risk to human health or to the environment.
3. Member States shall establish the methodology necessary for determining the concentration levels referred to in paragraph 2(b).
4. The information contained in the soil status report shall be used by the competent authorities for the purposes of identifying contaminated sites in accordance with Article 10(1).

**A] Does imply:**

- Owners or prospective buyers of sites (“Annex II locations”) should provide a soil status report to the competent authorities.
- The soil status report is issued by an authorised body or person appointed by the Member State (not by the competent authorities created under article 10)
- Information about soil becomes available to the authorities and to the public if the soil status report leads (via on site risk assessment triggered by the report) to the identification of a contaminated site.
- Because the information contained in the soil status report is to be used for purposes of identification of contaminated sites, the methodology for determining (= measuring ??) the concentration levels should be the same as for article 11
- The concentration levels of contamination giving reasons to believe that they pose a significant risk to human health or the environment should be the same as in article 11 if the land status report is to be used to draw up a contaminated site inventory.

**B] Does not imply:**

- The article does not imply that information for the soil status report should always originate from soil investigations paid by owners or buyers. The information necessary for the status report may already be in possession of the competent authorities.
- It also does not imply that identification of a contaminated site by the authorities should be based on a single land status report.

- The article does not imply that the authorised body or person cannot be the same as the competent authority, or that there should be a single body or person per Member State.
- The article does not imply (at least this is unclear) that concentration levels at which there are sufficient reasons to believe that the dangerous substances concerned pose a significant risk to human health or to the environment are also referring to an approved future use.

**C] Scientific comment:**

- See earlier discussion about “measurement”

**D] Practical consequences:**

- For many countries the soil status report is a new legal instrument, which may lead to adjustment of several laws. Some countries do have mechanisms in place that may in the end lead to the same results. The need to consider the possibility of soil contamination is property transfer is often based in private law, and buyers or sellers are may already be legally obliged to inform the competent authorities if the contamination is severe enough to cause risks for human health and the environment.

*Article 13*  
*Remediation*

1. Member States shall ensure that the contaminated sites listed in their inventories are remediated.
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 and approved future use, no longer poses any significant risk to human health or the environment.
3. Member States shall set up appropriate mechanisms to fund the remediation of the contaminated sites for which, subject to the polluter pays principle, the person responsible for the pollution cannot be identified or cannot be held liable under Community or national legislation or may not be made to bear the costs of remediation.

**A] Does imply:**

- All contaminated sites need to be remediated as far as they are listed in the inventory.
- Remediation only refers to actions on the soil involving contaminants. Changing the (approved) landuse can result in a situation no longer posing significant risks but this does not seem to qualify as remediation.
- Long term monitoring and monitored natural attenuation do qualify as remediation.
- A funding mechanism for remediation of sites for which the polluters cannot bear the costs (because they cannot be held responsible or cannot pay)

**B] Does not imply:**

- The article does not imply that sites removed from the inventory of contaminated sites because current or approved future use changed the situation in one no longer posing significant risks, still need to be remediated.
- A funding mechanism does not imply that such a fund only consists of public money. Some countries have a ranking system to answer the question “who pays” for the remediation (and the necessary soil investigations and risk assessments): First: the polluter, second: the owner, third: the one who makes a profit by developing the site and last: the public authorities (state).

**C] Scientific comment:**

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**D] Practical consequences:**

- It will take some efforts to avoid that “funding mechanism” is explained as “public funding”.

*Article 14*  
*National Remediation Strategy*

1. Member States shall, on the basis of the inventory and within seven years from [transposition date], draw up a National Remediation Strategy, including at least remediation targets, a prioritisation, starting with those sites which pose a significant risk to human health, a timetable for implementation, and the funds allocated by the authorities responsible for budgetary decisions in the Member States in accordance with their national procedures.

Where containment or natural recovery are applied, the evolution of the risk to human health or the environment shall be monitored.

2. The National Remediation Strategy shall be in application and be made public no later than eight years after [transposition date]. It shall be reviewed at least every five years.

**A] Does imply:**

- The drawing up of a plan with a description of objectives and targets for remediation, a list of priority sites (starting with the ones that pose significant risk to human health), a timetable for implementation of the plan and funds allocated. This document will be made public and need to be reviewed every 5 years.
- Sites posing significant risks to human health have a higher priority. Because the risks have definitely been evaluated in view of the current and approved future use of the land, future uses leading to health risks have a higher priority for remediation than current uses leading to environmental risks (quite often groundwater contamination)

**B] Does not imply:**

- A list with generic numerical remediation targets for each contaminant and each land use.
- A ranking of sites according to risk for human health ( first) and the environment (next), dictating the timetable for remediation and ignoring other priorities.
- That the national remediation strategy can not be a compilation of local or regional remediation programs with their own priorities.

**C] Scientific comment:**

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**D] Practical consequences:**

- Member States that have been running soil remediation policies and programs for some years may already have remediated (or adapted the landuse of) those sites in which the current use led to significant risk for human health. Most remediations are now dealing with environment (groundwater) or are initiated by landuse changes. In the latter case many social and economic aspects are governing the priority for remediation. Decisions what, how and when to remediate are made at the local level, based on a very general national framework for contaminated land risk management. As long as this is recognised the drawing of a national remediation strategy according to article 14 will not cause big problems.
- Member States that are starting or started recently to address contaminated land issues have to face the debate about priorities of future use related human health risk versus current use related environmental risks. This could be avoided by adapting the text of 14-1 to "starting with those sites which pose a significant risk to human health in view of their current use"



*Article 15*  
*Awareness raising and public participation*

1. Member States shall take appropriate measures to raise awareness about the importance of soil for human and ecosystem survival, and promote the transfer of knowledge and experience for a sustainable use of soil.
2. Article 2(1), (2), (3) and (5) of Directive 2003/35/EC shall apply to the preparation, modification and review of the programmes of measures on risk areas referred to in Article 8 and the National Remediation Strategies referred to in Article 14.

**A] Does imply:**

- That the member states have to make some efforts to promote awareness
- That the Member States have to ensure that public participation is taking place during the development of the National remediation strategy.

**B] Does not imply:**

- That public participation during the development of the National remediation strategy is confined to the national (state) level. It is hard to imagine how public participation can be implemented in this case. Public participation is of utmost importance in local decisions about contaminated land restoration and brownfield redevelopment, that is at the level of individual projects. The local spatial plans, addressing the environmental social and economical needs for land use and landuse changes, and the political choices can lead to priorities for remediation. These local plans often also provide opportunities for public participation in decision-making. The National Remediation plan is likely to be built up from the local plans, and in that aspect it can be the result of public participation. But for those aspects where a National Remediation strategy is more than the sum of the local plans, public participation is more difficult and democratic control by parliament seems to be the only mechanism.

**C] Scientific comment:**

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**D] Practical consequences:**

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*Article 16*  
*Reporting*

1. Member States shall make the following information available to the Commission within eight years from [transposition date], and every five years thereafter:
  - (a) a summary of the initiatives taken pursuant to Article 5;
  - (b) the risk areas established pursuant to Article 6(1);
  - (c) the methodology used for risk identification pursuant to Article 7;
  - (d) the programmes of measures adopted pursuant to Article 8 as well as an assessment of the efficiency of the measures to reduce the risk and occurrence of soil degradation processes;
  - (e) the outcome of the identification pursuant to Article 11(2) and (3) and the inventory of contaminated sites established pursuant to Article 10(2);
  - (f) the National Remediation Strategy adopted pursuant to Article 14;
  - (g) a summary of the initiatives taken pursuant to Article 15 as regards awareness raising.
2. The information referred to in paragraph 1(b) shall be accompanied by metadata and shall be made available as documented digital georeferenced data in a format that can be read by a geographic information system (GIS).

**A] Does imply:**

- It is obvious that a EU soil framework directive will include some reporting obligations.

**B] Does not imply:**

- It is noted that georeferenced information is only necessary for risk areas. Some COMMON FORUM members were afraid that this would also be the case for contaminated sites

**C] Scientific comment:**

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**D] Practical consequences:**

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*Article 17*  
*Exchange of information*

Within one year from [entry into force], the Commission shall set up a platform for the exchange of information between Member States and stakeholders on the risk area identification pursuant to Article 6 and on risk assessment methodologies for contaminated sites currently in use or under development.

**A] Does imply:**

- A very useful initiative which may improve contaminated land management throughout EU.

**B] Does not imply:**

- That the platform will be structured like the traditional "Committee" described in article 19.

**C] Scientific comment:**

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**D] Practical consequences:**

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*Article 18*  
*Implementation and adaptation to technical progress*

1. The Commission may, in accordance with the regulatory procedure with scrutiny referred to in Article 19(3), adapt Annex I to technical and scientific progress.
2. Where, on the basis of the exchange of information referred to in Article 17, a need to harmonise the risk assessment methodologies for soil contamination is identified, the Commission shall adopt common criteria for soil contamination risk assessment in accordance with the regulatory procedure with scrutiny referred to in Article 19(3).
3. Within four years after [date of entry into force], the Commission shall adopt, in accordance with the regulatory procedure referred to in Article 19(2), 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.

**A] Does imply:**

- Paragraph 2 does imply that the commission will only adopt common criteria for soil contamination risk assessment if the organised exchange of information indicates a necessity for harmonization risk assessment methodologies

**B] Does not imply:**

- That the commission will fully harmonize contaminated land risk assessment. The wording suggest a “parsimonious” approach: only common criteria if necessary.
- That the commission (on its own) decides whether certain aspects of risk assessment need to be based on common criteria.

**C] Scientific comment:**

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**D] Practical consequences:**

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### *Article 23*

#### *Amendment to Directive 2004/35/EC*

In Article 6 of Directive 2004/35/EC, paragraph 3 is replaced by the following:

“3. The competent authority shall require the remedial measures to be taken by the operator. Subject to Article 13(1) of Directive xx/xx/xx, if the operator fails to comply with the obligations laid down in paragraph 1 or 2(b), (c) or (d) of this Article, or cannot be identified or is not required to bear the costs under this Directive, those measures may be taken by the competent authority itself.”

#### **A] Does imply:**

- A change in the liability directive to harmonize requirements concerning parties responsible for remediation of contaminated soil.

#### **B] Does not imply:**

- The article does not imply that the scope of the liability directive concerning new contamination is the same as the soil framework directive for historical contamination. The liability directive is about environmental damage defined as:
  - direct or indirect damage to the aquatic environment covered by Community water management legislation ;
  - direct or indirect damage to species and natural habitats protected at Community level by the 1979 " Birds " Directive or by the 1992 " Habitats " Directive;
  - direct or indirect contamination of the land which creates a significant risk to human health.
- The contaminated land remediation part in the SFD is about contamination IN soil that poses significant risk to human health and the environment (which is more than EU community water management and birds and habitats directives).
- The article does not imply that the different national legal regimes for old (historical) soil contamination and new contamination are no longer valid.

#### **C] Scientific comment:**

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#### **D] Practical consequences:**

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