

## GENERAL INFORMATION

Country /State - Region - Province	Person(s) completing the questionnaire	Organisation	Email	Remarks
Belgium / Flanders Region	Marijke Cardon and Eddy Van Dyck	OVAM	marijke.cardon@ovam.be eddy.van.dyck@ovam.be	The following link gives an overview in English of the use of excavated soils in Flanders <a href="http://www.ovam.be/jahia/Jahia/pid/1284">http://www.ovam.be/jahia/Jahia/ pid/1284</a>

Please fill in the questionnaire by giving short answers to the questions presented in the three spreadsheets (A, B and C). Please write your answers on the empty rows below the questions.

Please note that the questions are related only to EXCAVATED contaminated soil (except Question 1.), including treated contaminated soil.

We are only expecting one filled questionnaire per country or region/province, so please agree on completing the questionnaire with you colleagues, if more than one person from your country will be attending the meeting.

We have introduced some alternative answers and explanations to help you with your answers and to hopefully shorten the time of completing this questionnaire, so do not hesitate to use them, if they are appropriate.

When the questions are not relevant to your country or you don't have any answers, you can use the following abbreviations: NR - not relevant, NI - no idea.

Please feel also free to provide links to any websites or documents for further information.

**A- General situation**  
**Management of excavated contaminated soil**

**1. What are the approx. proportions of *in situ*, on site and off site techniques in site remediation?**

*Of all the remediation works between 1996 and 2008, 60% is done with ex-situ remediation, 10% isolation and 30% in-situ remediation (soil vapor extraction, airsparging, bioventing, reactive walls, natural attenuation)*

**2. What is the typical amount of annually excavated contaminated soil (tons per year)?**

Please indicate, if the figure is based on estimate or compilation of statistics.

*Based on technical reports we estimate an amount of approximately 20 million ton excavated soil per year.*

**3. What are the most common treatment methods for excavated contaminated soil?**

biological and physico-chemical treatment

**4. How much of all the excavated contaminated soil is typically reused as such and/or as treated?**

Alternative answers: < 10%, 10-30%, 30-50%, 50-70%, 70-90%, >90%, etc. Please indicate, if the figure is based on estimate or compilation of statistics.

*75% is reused as soil, 5% is treated before use and 20% is used as construction material.*

**5. What are the main applications for reuse of excavated contaminated/treated soil?**

Alternative answers: road construction, other soil construction, noise barriers, land fill covers, etc.

*construction material, noise barriers, filling quarry's*

## **B- Policy issues**

### **Management of excavated contaminated soil**

#### **6. List the existing policy instruments for the management of excavated contaminated soil (concerning instruments on reuse, treatment and landfilling)**

Please shortly describe the instruments and/or provide links to websites or documents for further information

##### **6a. Regulations**

Soil Decree of 27 October 2006 and Flemish regulation on soil remediation of 14 December 2007, chapter 13. This Decree and executive order can be found in English on the OVAM-website: [www.ovam.be](http://www.ovam.be)

##### **6b. Guidelines**

Guideline for working with excavated soil (can be downloaded on the OVAM website in Dutch)

Standard procedure 'Making of a technical report' (can be downloaded on the OVAM website in Dutch)

Code of good practice 'marking of the cadastral working zone' (can be downloaded on the OVAM website in Dutch)

Code of good practice 'marking of the zone for local use' (can be downloaded on the OVAM website in Dutch)

Code of good practice 'working with excavated soil in a cadastral work zone' (can be downloaded on the OVAM website in Dutch)

Ministerial resolution 'list for use of excavated soil as construction material or retaining its shape products' (can be downloaded on the OVAM website in Dutch)

##### **6c. BAT/BATNEEC criteria**

BATNEEC criteria are used to determine whether contaminated soil is treatable. If the costs for treatment exceed the cost for dumping the material on a landfill (taken in mind that taxes for dumping are approximately 100 euro / tonne) the advice from the OVB (society of entrepreneurs of soil remediation activities) will state that the lot of soil is not treatable.

##### **6d. Registers/inventories/databases (e.g. concerning information on soil streams, locations of reuse sites and treatment technologies)**

If there are any, please indicate if the information is made available to the public

All administrative steps in the soil transfer procedure (see 10) are handled by soil management organisations. These are non-profit institutions that are recognised by and controlled by OVAM, but work independently. Under certain conditions, soil treatment centers and temporary storage depots, can act as soil management organisation for the soils treated/transferred by them. There are number of privat initiatives that act as 'soil banks' and provide overviews of supply and demand of excavated soil.

##### **6e. "Soil banks" or other logistic instruments for managing soil streams**

Excavated soils can be brought to licensed temporary storage depots. These are private, commercial initiatives.

##### **6f. Economic instruments (e.g. taxation and incentives)**

Zero tax: waste originating from remediation operations can be dumped at landfills, incinerated or co-incinerated without paying taxes when they can not be re-used. For this a formal approval by the OVAM and a declaration of non treatability is needed.

##### **6g. Other instruments**

The policy in Flanders states that soil which is contaminated in that way that it can not be used in residential area (land use type III), can't be used anywhere.

#### **7. Does the management of excavated contaminated/treated soil differ from the management of natural soil or the other waste streams?**

If yes, please shortly describe how they differ (e.g. different legislation, different reuse criteria, different taxation, restrictions on the use)

When soil is too contaminated to be re-used or treated, we see it as a waste. Waste streams are covered by the waste legislation (Decree on waste from 2 July 1981).

#### **8. Do you foresee any changes in the practices of soil reuse due to the new Waste Directive (2008/98/EC)?**

Answers expected only from the EU countries

No. The legislation on use of excavated soils is in compliance with the EU waste legislation. The legislation is already notified to the European Commission.

## **C- Technical issues**

### **Management of excavated contaminated soil**

#### **9a. Are there guidelines and associated criteria to determine whether soil is suitable for reuse?**

If yes, please shortly describe the contents of the guidelines (e.g. assessment tiers and the type of methods) and the type of criteria (e.g. soil remediation criteria, other risk-based soil concentration values, leaching criteria, toxicity criteria). Please feel also free to provide links to websites or documents for further information

For re-use of excavated soil as soil, distinction is made between use inside or outside the cadastral work zone of the excavation. Inside the cadastral work zone, soil can be re-used up to concentrations of 80% of the soil remediation criteria for the concerning type of land use. Outside the cadastral work zone, excavated soil has to comply with the values for free re-use. These values for free re-use lie between the target values (i.e. the average levels present in uncontaminated, natural soil) and the soil remediation criteria for land use type II (agricultural use). Under certain conditions, deviation of the conditions for re-use outside the cadastral work zone is allowed (see 9b). Excavated soil that does not comply with the values for free-use, can be used as building material if it meets the conditions for building material (maximal concentrations and leaching values).

#### **9b. Are those mandatory or is it possible to deviate from them based on site-specific risk assessment?**

If yes, please indicate if a risk assessment methodology to be used is defined

Outside the cadastral work zone, excavated soil with concentrations above the values for free-use can still be used as soil under the following conditions:

- no additional pollution of the groundwater is caused;
- possible exposure to contaminants does not create additional risks;
- concentrations are below 80% of the soil remediation criteria for the land use type of the receiving site;
- the mean concentrations are lower than the concentrations in the soil on the receiving site;
- if concentrations exceed the soil remediation criteria for land use type III (residential area), soil is treated before re-use if this complies with the BATNEEC principle.

#### **10. Are there specific procedures for quality control related to reuse and/or treatment of excavated contaminated soil?**

If yes, please list the elements they concern (e.g. sampling, methods, tests and interpretation of the results)

Prior to any excavation a technical report has to be drawn up in order to assess the quality of the soil to be excavated. Only excavations of less than 250 m<sup>3</sup> on sites where no risk activities for soil pollution are or were executed, are exempted from the procedure. For contaminated soil, the technical report is drawn up after the treatment. The technical report has to be approved by a soil management organisation before it can be considered as valid.

If a contractor wants to apply excavated soil on a site, he requests the soil management organisation for a soil transfer permission. If the quality of the excavated soil to be used meets the conditions for re-use (see 9a), the soil management organisation will deliver the necessary transport documents. After re-use, the soil management organisation will deliver a soil management report, confirming that the soil transfer was executed in accordance with the directives.

#### **11. Are there any requirements for structures, monitoring or site conditions related to reuse applications?**

If yes, please shortly describe the requirements

See 9 -10.