The Interaction between Soil and Waste Legislation in Ten European Union Countries

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*NICOLE*
A Network for Industrially Contaminated Land in Europe
The Interaction between Soil and Waste Legislation in Ten European Union Countries

A NICOLE study by
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An outcome of the NICOLE workshop in Sofia in November 2004, was that the role of waste legislation on a national and European Union (EU) level in contaminated land management is a key issue affecting NICOLE members. It also became clear from recent European Court of Justice (ECJ) rulings that the definition of waste on an EU level and its interpretation at a national level may differ from country to country.

Legal Background
Strictly speaking the EU defines waste as “any substance or object […] which the holder discards or intends or is required to discard”\(^3\). This implies that excavated soil, regardless of whether it is contaminated or not, or whether the excavation was required for other reasons than remediation, is to be considered waste.

The ECJ ruling states that the escape of hydro-carbons from a petrol station is to be considered as involuntary discarding (i.e. the fuel in the soil is waste). It goes a step further however, stating that the contaminated soil and groundwater are waste as well and that there is therefore an obligation to recover or dispose of it.

This ruling could have far-reaching consequences. One could argue that contaminated soil that is left in place is an illegal landfill, which would preclude any in situ remediation. It also renders risk assessments useless as the only possible conclusion after contamination has been detected is removal and treatment or disposal off site.

Aim of the NICOLE Study
Following the Sofia workshop NICOLE decided that it would be worthwhile to prepare an overview of a series of countries on how they have dealt with the relationship between waste and (contaminated) soil. Its aim can be summarised as follows:

- Review of the existing legal situation in a number of countries pertaining to soil and waste
- Extent of the (legal) link between contaminated soil and waste
- Organisation of reuse of contaminated soil
- Conditions under which contaminated soil could be left in place

Approach and Methodology
After an initial discussion with the NICOLE Steering Committee it was agreed that a request for funding would be submitted to cover 10 EU countries. The covering of all 25 member states of the EU was discarded as NICOLE does not have members in all EU member states. Moreover, the cost to cover that many countries would be too high for NICOLE to bear. The countries were selected on the basis of membership of NICOLE (see figure 1). Also, this selection was sufficiently representative to draw conclusions across Europe.

Figure 1
Selected Countries – Belgium, Czech Republic, Finland, France, Germany, Italy, The Netherlands, Spain, Sweden and the United Kingdom.

For the ten countries selected twelve answers were received as Belgium’s environmental legislation is organised on a regional level (3 regions). Several NICOLE members provided input for their specific country. Every country received an author and a reviewer. An overview is presented in table 1.

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- as amended by Directive 91/156/EEC
- as amended by Directive 91/692/EEC
- as amended by Commission Decision 96/350/EC
Authors were asked to focus on practical approaches and implementation, rather than providing a theoretical discussion. The reviews were carried out in May and June 2005. To ensure a consistent approach it was decided to provide some guidance by way of 10 questions.

**Legislative**
1. What is the legislative process your country uses to deal with contaminated soil?
2. What is the legislative process your country uses to deal with waste?

**Soil and waste relationship**
3. How does your country avoid that (contaminated) soil is considered as waste?
4. Under which assumptions is (contaminated) soil considered to be waste in your country?
5. What (practical and legislative) arguments can you use to leave contaminated soil in place if it doesn’t pose a risk?

**Soil reuse**
6. If excavated (contaminated) soil is regulated by waste legislation in your country how do you avoid any issues when you want to reuse soil after treatment?
7. What criteria are provided to be able to reuse (contaminated) soil?
8. How does your country promote beneficial re-use of (contaminated) soil?
9. Are there any barriers that hinder the reuse of (contaminated) soil?
10. When is treated contaminated soil considered clean and ready for reuse?

The results of this work is available and can be obtained at the NICOLE secretariat. They have been slightly reformatted for reasons of consistency, but none of the content has been changed. This article tries to provide a summary overview for the different countries and draws some conclusions as to how NICOLE should be involved in further clarifying some of the issues identified.

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**Comprehensive and Specific National Legislation on Soil Contamination**

Nine out of twelve countries/regions have overarching legislation that specifically addresses soil contamination (see table 2).

The remaining countries, Finland, France and the Czech Republic, cover contaminated soil through other legislation (see table 3).

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*Table 1 – NICOLE Members and Affiliates that participated in the study.*

<table>
<thead>
<tr>
<th>Country</th>
<th>Author</th>
<th>Reviewer</th>
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</thead>
<tbody>
<tr>
<td>The Netherlands</td>
<td>Arcadis</td>
<td>Tauw</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Parsons Brinckerhof</td>
<td>Arcadis and Taylor Woodrow</td>
</tr>
<tr>
<td>France</td>
<td>Inertec</td>
<td>Cabinet Conseil Sévêque</td>
</tr>
<tr>
<td>Belgium (3 regions)</td>
<td>Tauw</td>
<td>Arcadis</td>
</tr>
<tr>
<td>Germany</td>
<td>Arcadis</td>
<td>Tauw</td>
</tr>
<tr>
<td>Italy</td>
<td>MWH</td>
<td>Enviars</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Arcadis</td>
<td>Aquatatest</td>
</tr>
<tr>
<td>Finland</td>
<td>Fortum/ Neste</td>
<td>SYKE</td>
</tr>
<tr>
<td>Spain</td>
<td>Mediterra</td>
<td>Arcadis</td>
</tr>
<tr>
<td>Sweden</td>
<td>Kemakta</td>
<td>Mannheimer Swartling</td>
</tr>
</tbody>
</table>

*Table 1 – NICOLE Members and Affiliates that participated in the study.*

4 The full text of the reviews can be obtained at the NICOLE secretariat, contact Marjan Euser at marjan.euser@tno.nl or visit the NICOLE website www.nicole.org
Though no general or overarching legislation on soil contamination exists in France, there are many instructions and circular letters from the ministry or specific legislation that covers a specific aspect related to contaminated soil. Recent information (November 2005) points out that all the circular letters will be replaced by the end of 2005. At that time a new main circular letter will be issued based on 10 years of experience. This new circular letter will form the basis for French policy on polluted sites. Finland is preparing a decree on the assessment and need for remediation. The first draft of this decree is expected to be circulated by the end of 2005. The Czech Republic uses Methodical Guidelines that help assess whether remediation is required. They have no legal force. One can say that those three countries have developed their own specific legal frameworks that cover the management of contaminated soil.

### Reuse of Contaminated Soil

Half of the regions or countries have published guidance on the reuse of contaminated soil, though not all of it with legal force.

### Table 2 – Countries with Overarching Legislation on Soil Contamination.

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Legislation</th>
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<tbody>
<tr>
<td>Flanders – Belgium</td>
<td>Soil Remediation Decree, 1995</td>
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<tr>
<td>Brussels Region – Belgium</td>
<td>Ordonnance pertaining to the management of contaminated soil, 2004</td>
</tr>
<tr>
<td>UK</td>
<td>Contaminated Land Regulations, 2000 (England &amp; Scotland) &amp; 2001 (Wales) or Waste and Contaminated Land Order, 1997 (N. Ireland)</td>
</tr>
<tr>
<td>Walloon Region – Belgium</td>
<td>Decree pertaining to the remediation of contaminated soil, 2004 (not fully in force)</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>Soil Protection Act, 1987</td>
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<tr>
<td>Germany</td>
<td>Federal Soil Protection Law, 1998</td>
</tr>
<tr>
<td>Spain</td>
<td>Royal Decree, 2005</td>
</tr>
<tr>
<td>Italy</td>
<td>Ministerial Decree 471, 1999</td>
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<tr>
<td>Sweden</td>
<td>Environmental Code, 1998</td>
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</tbody>
</table>

### Table 3 – Countries Lacking Overarching or Comprehensive Legislation on Soil Contamination.

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Legislation</th>
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</thead>
<tbody>
<tr>
<td>Finland</td>
<td>Environmental Protection Act, 86/200</td>
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<tr>
<td>France</td>
<td>Law on Classified Installations, 2003/699</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>National Act on Waste, 2005</td>
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</tbody>
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### Table 4 – Countries/regions with Specific Guidance on Reuse.

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Legislation</th>
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</thead>
<tbody>
<tr>
<td>Italy</td>
<td>Decrees 22, 1997 and Law 443, 2001, both covering waste</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>Building Materials Decree</td>
</tr>
<tr>
<td>Germany</td>
<td>“LAGA&quot; and Federal Soil Protection Act</td>
</tr>
<tr>
<td>Brussels, Belgium</td>
<td>Specific guidance on reuse</td>
</tr>
<tr>
<td>Flanders, Belgium</td>
<td>Decree on Waste Prevention and Management</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Regulation 383/2001, amended by Regulation 294/2005</td>
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</tbody>
</table>
Of these six countries/regions Germany, The Netherlands, Flanders and Italy have sophisticated guidelines on how and when contaminated soil can be reused (see table 4 for overview). These guidelines often contain limit values on particular types of reuse (Germany, Netherlands, Flanders, Italy), leaching tests (Germany, Netherlands), specific circumstances under which reuse is acceptable. Of these countries/regions Flanders, The Netherlands and the Czech Republic provide specific incentives to promote reuse of contaminated soil. In Flanders and The Netherlands there is an explicit ban on land filling if the soil is treatable. Both also have official, published policies for reuse, with well-defined reuse criteria of treated or non-treated soil. The Czech Republic and Finland have a tax exemption for reuse of contaminated soil as construction material in landfills. In Finland, this tax exemption applies to any use of contaminated soil in a landfill, not just in the use for construction purposes. Both the Basque Region of Spain and England and Wales have prepared draft guidance on reuse. Those countries where no specific guidance has been developed all allow contaminated soil reuse, but on a case-by-case basis, which obviously leads to more legal uncertainty. All countries consider excavated, contaminated soil as waste, in line with the EU definition of waste. Often, it is reported that reuse is not really promoted or seen as an option in those countries where there is sufficient virgin soil available (Sweden, Finland), or sufficient greenfields for redevelopment (Spain, Finland), or where guidance is lacking (Wallonia, Finland).

All countries/regions allow that contaminated soil is left in place, provided that BATNEEC\(^5\) principles apply.

### Implications of Strict Interpretation of the EU Waste Framework Directive

A (very) strict interpretation of the definition of waste, such as demonstrated by the European Court of Justice, could result in an unworkable situation across the EU. In practical terms it comes down to the fact that excavated soil, even from greenfield sites, is classified as waste. There is also a fear that regrading of land, installing cover layers and using soil from services and foundation excavations to raise site levels can be classified as waste disposal. Risk based remedial schemes would become impossible. An example of what such a strict interpretation means can be seen in the UK. Indeed, it seems that the UK government is intent on rolling out their strict views on waste, and believes that other countries are not interpreting the law correctly. Some UK Environment Agency officers on the ground are picking up on this with strong negative consequences, as the hazard based waste approach collides with risk based land management. Unless appropriate exemptions can be obtained, these activities require a site Waste Management Licence (originally conceived to regulate waste treatment and disposal operations).

### Observations and Conclusions

Where comprehensive legislation exists it is often found to be quite recent, and sometimes still lacking in executive regulations (Spain, Walloon Region of Belgium). Where it is inexistant, regulators either cover it through waste legislation, or have published guidance as to how to deal with contamination (France, Czech Republic). Four countries/regions have dealt extensively with the relationship between contaminated soil, waste and reuse: The Netherlands, Germany, Italy and Flanders (Belgium). Most, if not all other countries, have adopted a more case-specific approach on reuse. It remains unclear how the ECJ ruling will affect this balance, but it is clear that even for those countries that have a sophisticated legal system are unsure as to whether their current legal provisions and guidelines will suffice to counter this ruling’s effects, as the UK’s enforcement approach illustrates.

### The Way Forward

NICOLE believes that the legal vacuum that exists in many countries with regard to the potential reuse of contaminated soil is to be clarified. In light of the recent ECJ ruling the definition of waste should be amended to make an exception for treatable and reusable contaminated soil. To support sustainable land management, reuse and treatment (in situ, on site or off site) of soil should be stimulated contrary to straightforward landfilling.

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\(^5\) Best Available Technology Not Entailing Excessive Costs.
NICOLE is a network for the stimulation, dissemination and exchange of knowledge about all aspects of industrially contaminated land. Its 125 members of 15 European countries come from industrial companies and trade organisations (problem holders), service providers/technology developers, universities and independent research organisations (problem solvers) and governmental organisations (policy makers).

The network started in February 1996 as a concerted action under the 4th Framework Programme of the European Community. Since February 1999 NICOLE has been self supporting and is financed by the fees of its members.

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