GENERAL INFORMATION

Country /State - Region - Province	Person(s) completing the questionnaire	Organisation	Email	Remarks

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.

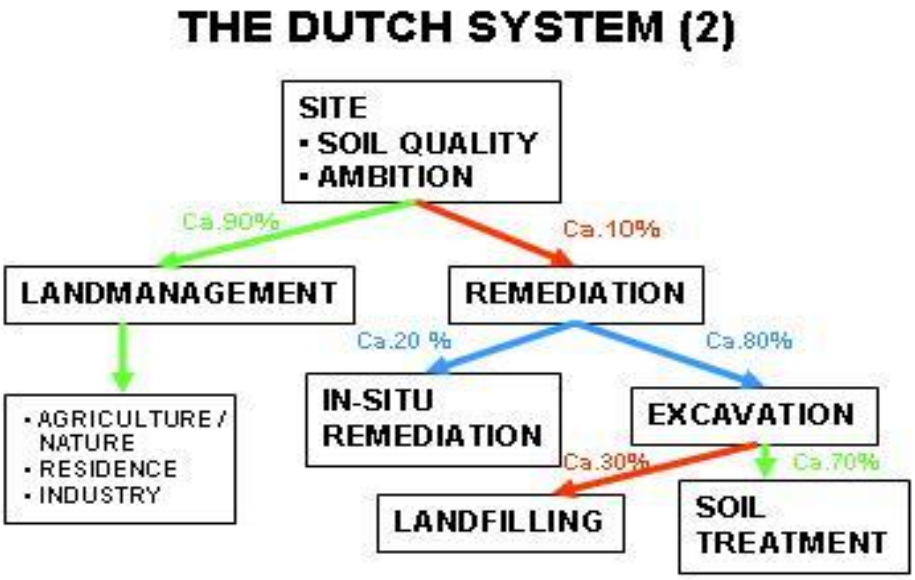
We have introduced some alternative answers and explanations to help you with your answers and to hopefully shorten the time of completing this questionnaire, so do not hesitate to use them, if they are appropriate.

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.

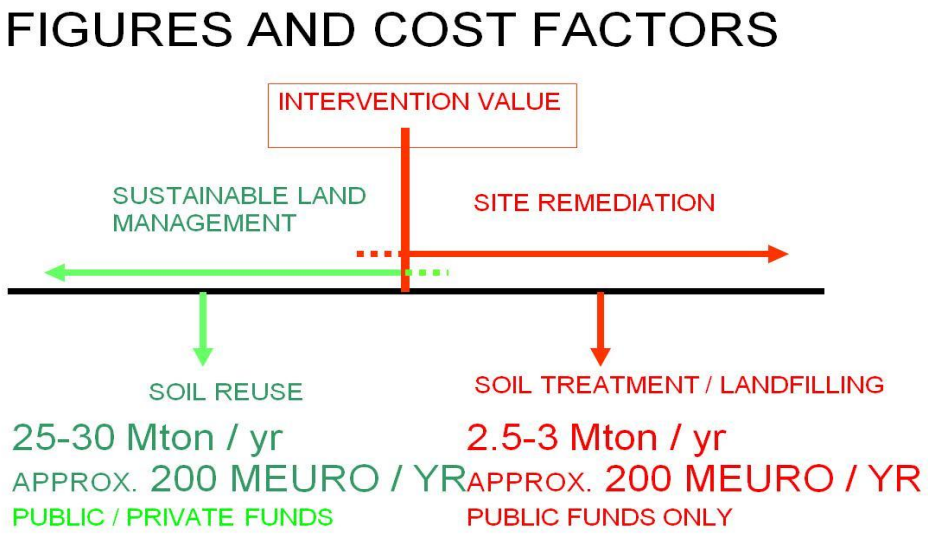
Please feel also free to provide links to any websites or documents for further information.

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?
See figures
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.
Estimated
3. What are the most common treatment methods for excavated contaminated soil?
thermal treatment, soil washing and landfarming (biological 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.
See http://www.senternovem.nl/Bodemplus/downloads/english/treatment.asp
See also figure below (estimated)
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.
Development of residential and industrial arreas, road construction, other soil constructions, noise barriers, land fill covers, dikes



Remediation
Soil only = 35 %
Groundwater = 10 %
Soil + GW = 55 %



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

6b. Guidelines

* Environmental Protection Act (NL: Wet milieubeheer)
* Soil protection act (NL: Wet bodembescherming) --> See: http://international.vrom.nl/pagina.html?id=37604

* Soil quality degree (NL: Besluit bodemkwaliteit): Degree for sustainable landmanagement. --> See: http://www.senternovem.nl/Bodemplus/downloads/bodembeheer/20071122soil_quality_decree.asp
* Soil quality Regulation (NL: Regeling Bodemkwaliteit)
* National Soil protection guidelines (NL: Nederlandse Richtlijn Bodembescherming))
* Soil Remediation Circular --> See: http://international.vrom.nl/pagina.html?id=37765
* The Circular on target values and intervention values for soil remediation --> See: http://international.vrom.nl/pagina.html?id=37604
* Circular on the Nationwide Inventory of contaminated sites (NL:Circulaire Landsdekkendbeeld)
* Numerous (technical) guidelines --> See www.sikb.nl and www.nen-bodem.nl

For additional information concerning Du tch laws regulatieon, circulars, policy documents and cabinet positions concerning the soil policy in recent years, see also the websit of the Ministry of VROM (http://international.vrom.nl/pagina.html?id=37600) and the website of Soil+: http://www.senternovem.nl/Bodemplus/english/index.asp

6c. BAT/BATNEEC criteria

NI

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

* located at the decentral authoroties and local/regional soilbanks. Not available to the public. Once a year there's an public evaluationrapport: see: http://www.senternovem.nl/Bodemplus/downloads/bosa/200906jaarverslag_bodemsanering_2008.asp (see downloads)
* registration centre Soil Quality: registration of re-use of soil, buildingmaterials and dredged soil (see: https://meldpuntbodemkwaliteit.senternovem.nl/MeldpuntBodemKwaliteit/Voorportaal.aspx)
* overview of treatment technologies (available to public): knowledge document of (aquatic)soilmanagent (see: http://www.bodemrichtlijn.nl/)

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

For an overview of Dutch soil banks: http://www.senternovem.nl/Bodemplus/bodemservice/digitaal/index.asp

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

* Industrial site regulation: subsidy for treatment of industrial sites (NL: Bedrijvenregeling)

6g. Other instuments

* See attachement: Legislation and instruments

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)

Yes, see attachementt: Dutch soil policies – a comprehensive overview

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

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

* www.senternovem.nl/Bodemplus/downloads/bodembeheer/20070901know_the_quality_of_your_soil.asp --> This report presents an overview of the underpinning of all the standards and assessment systems for the chemical quality of the soil, aquatic sediment, excavated soil and dredged material. These are the standards in the Decree and Regulation on Soil Quality, the 2006 Circular on soil remediation and the 2007 Circular on aquatic sediment remediation. Never before has such a complete overview been presented. It can be regarded as a milestone on the way towards a clear and consistent set of standards for the soil and aquatic sediment.

* Instrument to determine the urgency of soil remediation: http://www.risicotoolboxbodem.nl/sanscrit/

* Instrument to determine whether soil is suitable for reuse at an certain location: http://www.risicotoolboxbodem.nl/

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

It is possible to deviate from them on site specific risc assesment.

For the risk assessment methodology see: "Know the quality of your soil" --> http://www.senternovem.nl/Bodemplus/downloads/bodembeheer/20070901know_the_quality_of_your_soil.asp

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)

certified sampling, certified chemilcal analysis, certified investigation protocols and methods, certified depots and soil banks, environmental supervision over soil remediation.

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

If yes, please shortly describe the requirements

NR

Dutch soil policies – a comprehensive overview

The Netherlands has many laws and regulations. Two of the most important laws that serve as the foundation for Dutch soil policy are the **Soil Protection Act** (*Wet bodembescherming* - Wbb) and the **Environmental Protection Act** (*Wet milieubeheer* - Wm).

The Soil Protection Act [Wbb] contains general rules to prevent soil contamination. The Environmental Protection Act [Wm] is the most important environmental law, which establishes that permits must be obtained before certain activities may be performed. The permits are issued by the competent authorities. For soil policy, this law means, for example, that permits must state the extent to which companies must make provisions to protect the environment and the land. A responsibility to return the soil to its original state may also be in force. In most cases, the permits are issued by the municipalities and/or the provinces.

The Dutch laws and rules are based on principles as set out in the Soil Protection Act and the Environmental Protection Act. Important legislation in the current soil policy for dealing with soil pollution and guaranteeing conscious and sustainable soil management includes the **Soil Quality Decree** (*Besluit bodemkwaliteit*) and the **Soil Quality Regulation** (*Regeling bodemkwaliteit*).

The Soil Quality Decree contributes towards achieving a balance between the protection of soil quality for people and the environment, and the scope to use the soil for economic and social developments, such as residential building or road construction. The Decree consists of three sections:

1. Quality Assurance: this section contributes to assuring quality in the soil management process. The fundamental assumption is that requirements must be placed on quality of works and integrity of people to guarantee the quality and reliability of information, activities and implementing parties.
2. Building Materials: the Decree sets preconditions for the possible uses of stony materials, such as concrete, asphalt and brick, to protect the soil and surface water from possible pollutants.
3. Soil and Dredged Spoils: this section establishes how and where a certain quality of soil and dredged spoil may be used. The decentralisation of powers plays a main role in this. Local authorities are given more responsibilities and can set standards for policy specific to the region.

The Soil Quality Regulation provides a further explanation of the laws in the Soil Quality Act.

The **Circular on Soil Remediation 2009** (*Circulaire Bodemsanering 2009*) serves as a supplement to the Soil Protection Act. This circular is adapted to the new soil management policy as set out in the Soil Quality Decree, and applies to dry land. It contains guidelines for the use of remediation criteria and the determination of remediation goals in the case of soil pollution. Municipalities and provinces can use the remediation criteria to determine how serious the pollution is, and whether a site is in need of urgent remediation.

Another important circular is the **Circular on the Nationwide Inventory of Contaminated sites** (*Circulaire Landsdekkend Beeld*). This circular dates from 20 November 2001 and was established with the goal of determining the exact extent of soil pollution in the Netherlands. To this end, in 2004, the provinces and municipalities drew up a far-reaching list of all potentially polluted locations in their areas. Locations that were so contaminated that they posed risks to humans were characterised as urgent. The ultimate goal of the circular is to arrive at a uniform and comparable data set, which is available from the competent authorities. This data set has resulted in a list of projects, for which the most serious cases of soil pollution must be dealt with and under control before 2030.

For additional information concerning Dutch laws, regulations, circulars, policy documents and cabinet positions concerning the soil policy in recent years, see also the website of the Ministry of VROM: [http://international.vrom.nl/pagina.html?id=37604]

Soil Quality Decree

Since 1999, the reuse of lightly contaminated soil in the Netherlands has been regulated by the Building Materials Decree. The purpose of reusing soil is to minimise the use of primary materials (such as sand or clay) and to limit the number of landfills. Within the framework of the Building Materials Decree, the environmental quality of soil and other secondary materials – and therefore also their reuse options – were determined by a set of contaminant concentration and leaching standards. Upon evaluation of the Building Materials Decree in 2002-2003, it became apparent that the regulations were limiting the reuse options specifically for soil and aquatic sediments. Important factors identified were: the relatively high cost of application, poor enforceability, unpractical handling (and sampling) procedures, limitations for local customised solutions, legislative inconsistencies and the lack of a clear relationship between environmental risks and the standstill principle. A decision was therefore taken to alleviate these problems. After an intensive consultation process with all the stakeholders involved in addition to environmental and economic impact analyses, the new Soil Quality Decree was developed. This Decree relies firmly on two basic principles:

- **"Standstill"**. The applied soil should be of equal or better quality than the receiving soil. This ensures soil protection.
- **"Fit for use"**. The on-site soil quality should correspond with its current and/or future use. This ensures the protection of the ecological environment and human beings.