

## INTERNATIONAL COMMITTEE ON CONTAMINATED LAND

### QUESTIONNAIRE ABOUT LEGAL FRAMEWORK FOR SOIL/SITE CONTAMINATION MANAGEMENT

**COUNTRY: Norway**

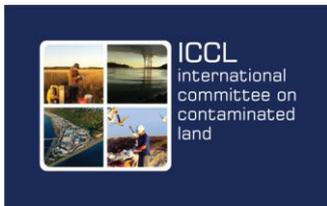
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#### **OVERALL CONTEXT**

1. Does your national policy have a specific definition of “contaminated site”, “contaminated soil”? If yes, please provide the definition.  
Regulations Relating to Pollution Control chapter 2, which regulates the remediation of contaminated sites where there is ongoing construction or excavation work has a definition of contaminated soil/site:  
"Soil or rock where the concentration of hazardous substances exceeds the normative values for contaminated soil or other hazardous substances which after a risk assessment is equated with them is considered contaminated. Soil where the concentration of inorganic hazardous substances does not exceed the local natural background level is not considered contaminated. Acidic types of rocks (for instance aluminous slate) that may pollute water and or air is defined as contaminated soil.  
  
A contaminated site is an area with contaminated soil.
2. Is Groundwater included in this definition? No, groundwater is regulated through the Groundwater Daughter Directive to the European Water Framework Directive.
3. Does your policy on contaminated sites/land/soil include other definitions (i.e. brownfield, sediment)? Only for contaminated sediments Contaminated sediments are sediments on the seabed that have elevated concentrations of pollutants.
4. Which sources are you considering? Industrial operations? Transport? Urban contamination? Etc. All possible sources are considered depending on the history of the site. Industrial, urban etc,

#### **LEGAL FRAMEWOK**

5. Does your country have legislation with respect to contaminated land management?  
Yes, the Pollution Control Act, §7 and § 51 and Regulations relating to Pollution Control chapter 2



- a. Whatever the situation is, please be precise if it's a specific or a common legislation, if integrated in a more general one (including prevention of emissions, soil protection, land planning, environment & health, etc.) Regulations Relating to Pollution Control, chapter 2 regulates the remediation of contaminated sites where there is a planned building activity. It states that when building or excavating (i.e. the building of new houses, digging ditches etc) in areas where there is a suspicion of, or confirmed contaminated soil, the developer has to do an investigation of the soil. If the investigation shows that the soil is contaminated (according to definition in question 1), the developer has to send in a remediation plan to the municipality.
- b. If there is no legislation, please be precise how you tackle the problem. What are the main policy objectives? The regulation mentioned above is only used in cases where there is a planned building activity on the site and not in cases where the contamination itself is so serious that it is the reason why remediation and excavation is done. In these cases contaminated soil is regulated through The Pollution Control Act which states that it is forbidden to pollute and that the person responsible for the pollution has to ensure that measures are taken to prevent pollution from occurring.
- c. What are the foundational principles on which the national policy is based? (e.g., polluter pays, risk-based, fit-for-use, stand-still, transparency, ...). Prevention of contamination and prioritized remediation following a risk based approach

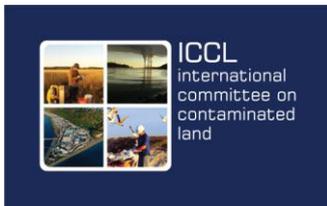
6. What is the Chain of Liability for the management of contaminated land?

- a. Polluter? Land owner? Last operator? Occupier?

The responsible party can be:

- The primary polluter
- The land owner
- The person who takes over an already polluting industry
- The mother company
- The developer/entrepreneur

The Pollution Control Act states that no person may possess, do, or initiate anything that may entail a risk of pollution and that the person responsible for the pollution has to ensure that measures are taken to prevent pollution from occurring. If the pollution already has occurred, the said person shall ensure that measures are taken to stop or remove the pollution or limit its effects (§ 7 and § 51). In cases where the responsible polluter is difficult to identify or no longer exists, the **landowner** can be held responsible for paying for assessments and remediation. This principle is laid down in the Pollution Control Act, which states that a person that **possesses** anything that there is a reason to believe may result in pollution also is responsible for the risk the pollution might have. The landowner is also the one who will benefit the most from a soil remediation, as the value of the land will increase substantially.



- b. Is there any difference between new and historic contamination? **No** difference, but newer sites are often regulated through permits given to the operator of the active industry.
  - c. Can a responsible party pass on the liability to a purchaser? (under statutory law? Contractually?) **No, the responsible party can still be liable**
  - d. Do you separate the obligation to remediate soil pollution and the liability regarding the damage caused by soil pollution and the related remediation measures? **?**
  - e. Are you facing specific situations (e.g. privatization of the industrial activities, war impacted areas, ...) needing special programme? **No**
7. Are there any specifications at regional / local level? **No**
8. Are there specifications for site closure? **Remediation activity is terminated when remediation goals are met. These are set site-specific , but often related to generic standards.**
9. Is there any legal requirement to conduct investigation for potential contamination in the sale of the property? **No, but our database of contaminated sites is directly linked to the Cadastre, Norway's national land register. This ensures that sellers and buyers of land and the municipality are informed about contaminated soil on their properties. Where there is planned building activity, chapter 2 of Regulations Relating to Pollution Control applies.**
10. Does your national policy have any kind of inventories/registers? **If yes, please be precise regarding which sites are registered, how the data are collected and if the databases are public. A nationwide database on contaminated sites has been established, which includes data on all contaminated sites that are known to the pollution control authorities. The database is updated as new information becomes available and is reported. The database contains information on which properties are contaminated (by property registration number), the type of contamination, the type of polluting activity that has taken place on the property, whether the pollution control authorities have issued orders for any investigations or action, investigations and clean-up operations that have been carried out, and the current level of pollution. The localities can also be shown on a map. The database is available to the public (<http://grunn.miljodirektoratet.no/> in Norwegian only). There is also a possibility to report sites where one suspects that the ground is contaminated. Currently over 4000 contaminated sites are registered. The database is directly linked to the Cadastre, Norway's national land register. Military sites are handled in a similar, but separate database only available to the Pollution Control Authorities.**



Figure 1: Triangles show registered contaminated sites in a part of Trondheim city.

11. What are the strong, weak points and the major bottlenecks with respect to the current regulations in your country?

Strong:

Strong regulation through the Pollution Control Act also on liability

A risk based policy

Some funding made available through the Ministry of Environment

Our database on contaminated sites is linked to the Cadaster and several other databases

Weak:

Many small municipalities with little competence on managing contaminated soil and its regulations.

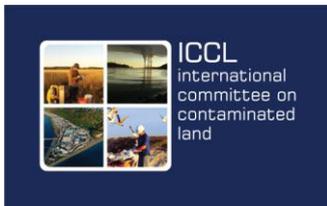
## TECHNICAL ISSUES RELATED TO THE LEGAL FRAMEWORK

12. Are there site investigation requirements? General site investigation requirements are given by ISO 10381-5:2006, "Soil Quality Sampling, part 5: Guidance on the procedure for the investigation of urban and industrial sites with regard to soil contamination" and own guidelines

13. Are Risk Assessment & Management the main tools? Yes, in combination with guideline values on human health. The guideline values are divided into 5 (human health) classes which takes land-use into account.

14. Are there specific technical approaches used?

- a. For Human Health (HH), Ecosystems, Groundwater (GW), Surface waters (SW), other targets (i.e. buildings, infrastructures, ...please be precise). Yes, for hh, sw (fresh and coastal) and gw, but not for ecosystems, also for sediments
- b. On a site by site specific approach, or by derivation of guideline values? If possible, please detail your answer. Both in combination, guideline values for human health, surface water and sediments (Fresh and coastal). Ra tools exist for sediments and soil



- c. Do you take into consideration others sources of pollution in the risk assessment? [High natural background levels are considered and omitted.](#)

15. If the national policy uses guideline values, please be precise in describing the following points:

- a. Reasons for derivation of generic values [Risk assessment tools where often misused by accepting very high levels of contaminants. The values make it easier for environmental authorities to evaluate and make decisions in cases involving contaminated soil, especially for small municipalities with few resources and little knowledge with managing contaminated soil.](#)
- b. Objectives / levels of implementation (investigation, risk assessment, remediation) [all levels](#)
- c. Priority substances: [The environmental authorities have drawn up a priority list of about 30 substances and groups of substances of particularly high concern. The list also sets national targets for the elimination of use and releases of these substances by 2020: <http://www.environment.no/Topics/Hazardous-chemicals/Hazardous-chemical-lists/List-of-Priority-Substances/>](#)
- d. Protocols of derivation (including acceptable risk levels used). [Our guidelines for risk assessment includes calculations etc. An older version has been translated to English: \[Norwegian guidelines for the risk assessment of contaminated sites \\(Old version!\\)\]\(#\) Some values are altered in new revised versions, but calculations are similar.](#)

16. What are the drivers for remediation?

[Usually either a legal obligation \(e.g. through the listing to the register of contaminated sites\) or changes of use and redevelopment. Governmental report no. 14 from 2006-2007 "Working together for a environment free of toxic substances" holds guidelines for the public effort against contaminated land. Amongst other things it gives a plan of action for remediation of contaminated soil in day-care centres. The plan was carried out in the years 2006 to 2010 and was directed towards all day-care centres in the 10 largest cities and the 4 biggest industrial areas in Norway. It also lists some demands for all the contaminated areas that 1\) Induces a health risk. 2\) Has a risk of dispersion of the contaminants. 3\) Is situated on Svalbard \(arctic\)](#)

- a. To what level is clen up required(i.e. acceptable risk, land use values, ...) [acceptable risk in relation to current and future land use values \( human health\) and dispersion of contaminants into surface/ground water \(risk assessment\) in som cases also terrestrial ecosystem at site](#)
- b. Does your national policy use cost-benefits analysis for the choice of the remedial solution? [Yes](#)
- c. What are the main remediation strategies or treatment techniques used in your countries (including Natural Attenuation)? [Excavation and disposal and immobilizing/ barrier systems](#)

17.

- a. Distribution of techniques? [No information](#)
- b. Evolution in time? [no](#)
- c. Acceptance of innovative treatment techniques? [yes](#)



18. Are you considering sustainability in the national approach? **To some extent**
- If yes, how? In particular, how the three pillars of sustainability are considered and balanced.
  - If no, explain the reasons and the future challenges.
19. How does your country bridge the CLM approach with:
- Land planning programmes? **Linkage between Building Act and contaminated soil,**
  - Public health programmes (aggregation of impacts on surrounding populations)

## **FINANCIAL ISSUES**

20. What are the specific practices with respect to “Orphan sites”?

Yes, but very restricted. The costs of assessing and remediating contaminated soil shall be borne by the polluter or in some cases the landowner. For sites handled under chapter 2, the cost shall be carried by the developer of the property. The Climate and Pollution Agency rarely finance remediation costs, but some funds are made available by the Ministry of Environment each year. Most of these funds are used for remediating sediments, where the identification of responsible parties is much more difficult. The criteria for considering funding are:

if the State is the responsible polluter

if the responsible party cannot be identified, is not able to fund, or for other reasons should not be held responsible

if the need for remediation is urgent, the state can finance the remediation and claim a refund from the responsible party after remediation is complete

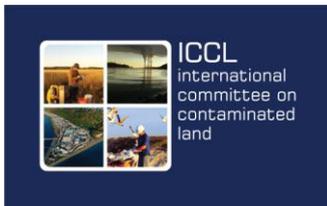
if there is a need for gathering information and getting more knowledge to assess the need for remediation

if it is necessary to assist in ensuring a collective remediation in an area with multiple responsible parties

if there for other reasons is unreasonable that the responsible party bear to pay all the costs

21. Do you have an idea of the annual budget allocated to Soil Contamination Management?

- How is it divided between public, private and others? **Private 80% public 20%**
- What are the main financial / funding systems in place in your country? (e.g. Financial guarantees, insurance, public – private partnerships, special foundation, industrial consortium, enforcement, ...).
- Between the different steps of management (investigation, remediation, monitoring...)? **Survey: 15%, Investigation: 25%, Remediation: 45%, Operation and monitoring: 15%.**



## **ORGANISATIONAL ISSUES**

22. How are stakeholders and in particular communities involved in the approach?

Remediation plans and the Pollution Control Authorities orders of remediation are always notified to relevant parties and they are given the possibility to express their opinion before a final administrative decision is made. If a stakeholder does not agree on the final decision, a written appeal can be sent in and the case is then re-handled by a higher authority. This follows criteria set in our Public Administration Act. Larger cases/big remediation projects often have public hearings that are announced on our websites, published in newsletters etc.

23. Is there a specific approach for:

- a. Brownfields? No
- b. Megasites? No
- c. Widespread pollutions? No
- d. Reuse of excavated soils? (e.g., in relation to their quality) Clean soil can be reused anywhere also outside of site as long as this use is in compliance with other legislations (the Planning and Building Act etc.). Contaminated soil that is not re-used on site in compliance with soil quality criteria has to be delivered to an approved landfill or a treatment plant.

24. Does your national policy include any accreditation system for consultants or service providers? If yes, please provide some details. No

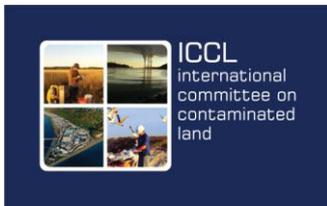
25. Do you have any training / capacity building programme, any management accountability and performance measurement? No

26. How is the necessary inter-governmental coordination for CLM organized? (e.g. with Health Protection Department, with the public site owners, with state or local public sector environmental organizations, with special interest advocacy groups, ) No details

## **CRUCIAL DEVELOPMENTS IN THE FUTURE**

Are there any additional issues to be further developed in the following months/years whatever they are (Research and Development needs, organisational issues, ...)? Further development and update of our database for contaminated sites. New guidance on dispersion on contaminants and terrestrial ecosystem risk assessments. Focus on sites with "new" contaminants such as perfluorinated substances.

Unofficially or officially, do you see any opportunities for collaboration in the coming months or years that may improve overall coordination among international organizations? (e.g., conferences, workshops, international (technical or policy)



initiatives, growing alliances (e.g., in support of redevelopment /reuse of contaminated lands, etc.).

## **REFERENCES**

Please give most important references (documents, website, projects, and case studies) that could be relevant for explaining your national approach

[State of the environment Norway – Contaminated soil](#)

[State of the Environment Norway - Contaminated sediments](#)

[Norway's chemical policy on working with contaminated soil \(page 95\)](#)