INTERNATIONAL COMMITTEE ON CONTAMINATED LAND

QUESTIONNAIRE ABOUT LEGAL FRAMEWORK FOR SOIL/SITE CONTAMINATION MANAGEMENT

COUNTRY: CANADA / ONTARIO
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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.

   The national definition comes from the CCME[i]. A contaminated site is defined as a site at which substances occur at concentrations: (1) above background levels and pose or are likely to pose an immediate or long-term hazard to human health or the environment, or (2) exceeding levels specified in the current policies or regulations.

2. Is Groundwater included in this definition?

   Yes. Groundwater is considered in the definition. A contaminant is any physical, chemical, biological, or radiological substance in air, soil, or water that has an adverse effect. Any chemical substance whose concentration exceeds background concentrations or which is not naturally occurring in the environment.

3. Does your policy on contaminated sites/land/soil include other definitions (i.e. brownfield, sediment)?

   - Groundwater: All subsurface water that occurs beneath the water table in rocks and geological formations that are fully saturated.

- Surface Water: Natural water bodies, such as rivers, streams, brooks and lakes, as well as artificial and navigational canals, in direct contact with the atmosphere.

- Saturated Zone: The zone where voids in the soil or rock are filled with water at greater than atmospheric pressure. In an unconfined aquifer, the water table forms the upper boundary of the saturated zone.

- Water Table: The upper limit of the saturated zone. It is measured by installing wells that extend a few feet into the saturated zone and then recording the water level in those wells.

- Soil Gas: The vapour or gas that is found in the unsaturated zone.

- Remediation: The improvement of a contaminated site to prevent, minimize or mitigate damage to human health of the environment. Remediation involves the development and application of a planned approach that removes, destroys, contains or otherwise reduces the availability of contaminants to receptors of concern.

- Conceptual Model: An idealization of a hydrogeological system on which one can base a mathematical model. The conceptual model includes assumptions on the hydrostratigraphy, material properties, dimensionality, and governing processes**.**

4. Which sources are you considering? Industrial operations? Transport? Urban contamination? Etc.

   All anthropogenic sources of potential contamination are considered. Typically brownfield development occurs in industrial areas with the majority of contaminated sites occurring post commercial/industrial activities.

LEGAL FRAMEWOK

5. Does your country have legislation with respect to contaminated land management?
   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.)

      Canada has a number of regulations and acts pertaining to the management of contaminated land. Each of the Provinces in Canada typically have their own regulation, including a provincial *Environmental Protection Act,* and subsequent pieces of regulations, including

environmental assessment, investigation, remediation, waste, regulated substances and compliance.

b. If there is no legislation, please be precise how you tackle the problem.

Not Applicable.

c. What are the main policy objectives?

The main policy objectives of the regulatory framework are to set out structured approach for the protection of the environment. The regulatory framework includes the guidance on how to assess environmental areas for protection, key areas of consideration and regulatory standards to be adhered to. The framework also sets out the standards for prosecution and issues of compliance.

d. What are the foundational principles on which the national policy is based? (e.g., polluter pays, risk-based, fit-for-use, stand-still, transparency, …).

Across Canada the polluter-pays principle has been adopted.

6. What is the Chain of Liability for the management of contaminated land?
   a. Polluter? Land owner? Last operator? Occupier?

As the polluter pays principle is employed the chain of liability is:
- Polluter (if not the land owner)
- Land Owner
- Government

Typically the liability for a contaminated site is with the land owner and it is the owners' responsibility to seek restitution from former polluters or former land owners.

b. Is there any difference between new and historic contamination?

As contamination is considered as a risk to either human health or the environment, no distinction is made between new and historic contamination.

c. Can a responsible party pass on the liability to a purchaser? (under statutory law? Contractually?)

A responsible party may pass on liability through the sale of land through contractual means. It is the purchasers' responsibility to

conduct due diligence and understand the extent of the liability being obtained.

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?

Obligations to remediate contamination are considered for the protection of human health and the environment. There is no distinction made between obligation to remediate and the liability incurred with undertaking such actions.

e. Are you facing specific situations (e.g. privatization of the industrial activities, war impacted areas,…) needing special programme?

There are three key areas of policy interest with regard to contaminated sites in Canada:

1. Declining manufacturing and de-industrialized of urban centres and port area across Canada.
2. The re-urbanization of previously industrial areas, and in and around metropolitan cores of major cities.
3. Urban sprawl of Canadian cities to the peri-urban boundaries has caused densification policies to emerge, which support increasing land areas for repopulation and generating new areas of industrial/commercial activity.

Both of these issues are creating the redevelopment and re-use of contaminated sites, and forcing the consideration of management, and new policy regimes.

7. Are there any specifications at regional / local level?

All levels of government in Canada consider the management of contaminated sites within their specific regulatory domain, and generate specifications for each site on an individual basis.

8. Are there specifications for site closure?

Specifications for site closure are assessed based on the proposed future land use. For example, land to be used for residential purposes must be remediated to a residential standard and must comply with all regulatory bodies for residential use.

9. Is there any legal requirement to conduct investigation for potential contamination in the sale of the property?

There is no legal requirement to conduct environmental due diligence during the sale process, however it is a very common practice. Environmental assessment is required at many provincial and municipal planning decision points. In some jurisdictions in Canada, municipal conversion of industrial land to residential land uses triggers legal requirements for investigations and rehabilitation.

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.

    There are inventories of contaminated sites kept at both the federal and provincial levels of government.

    Federally maintained lands with environmental data (reports, analytical results, compliance records etc) are recorded in publically accessible databases. See the Federal Contaminated Sites Inventory for Canada: http://www.tbs-sct.gc.ca/fcsi-rscf/home-accueil-eng.aspx

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

    A strength of the current regulatory framework is clear guidance provided to potential developers of brownfield sites. Contaminated properties can be put through a regulatory process to achieve a desirable outcome.

    A weakness is that industry is often slow to adapt to regulatory change and does not keep up with changing environmental compliance conditions. It is very common to see industry not in compliance with new regulation creating new contaminated lands.

TECHNICAL ISSUES RELATED TO THE LEGAL FRAMEWORK

12. Are there site investigation requirements?

    Environmental Site Assessment is typically required to assess and confirm the presence of contamination at a property, which is embedded in provincial legislation.

13. Are Risk Assessment & Management the main tools?

    Risk based tools are incorporated at every stage in the assessment and management of contaminated lands. Standards or guideline values used to assess the potential for human and ecological impacts are risk derived numbers based on up to date science. Typically once contamination is

identified, risk based solutions are undertaken to manage contamination.

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).

       STILL BEING REVIEWED

    b. On a site by site specific approach, or by derivation of guideline values? If possible, please detail your answer.

       STILL BEING REVIEWED

    c. Do you take into consideration others sources of pollution in the risk assessment?

       Risk assessment can take into account area-wide contamination or sources of pollution original from another property onto the property currently being investigated.

15. If the national policy uses guideline values, please be precise in describing the following points:
    a. Reasons for derivation of generic values
    b. Objectives / levels of implementation (investigation, risk assessment, remediation)
    c. Priority substances
    d. Protocols of derivation (including acceptable risk levels used).

16. What are the drivers for remediation?
    a. To what level is clean-up required? (i.e. acceptable risk, land use values, …)
    b. Does your national policy use cost-benefits analysis for the choice of the remedial solution?

17. What are the main remediation strategies or treatment techniques used in your countries (including Natural Attenuation)?
    a. Distribution of techniques?
    b. Evolution in time?
    c. Acceptance of innovative treatment techniques?

18. Are you considering sustainability in the national approach?
    a. If yes, how? In particular, how the three pillars of sustainability are considered and balanced.
    b. If no, explain the reasons and the future challenges.

19. How does your country bridge the CLM approach with:

a. Land planning programmes?
b. Public health programmes (aggregation of impacts on surrounding populations)

FINANCIAL ISSUES

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

21. Do you have an idea of the annual budget allocated to Soil Contamination Management?
    a. How is it divided between public, private and others?
    b. 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, …).
    c. Between the different steps of management (investigation, remediation, monitoring…)?

ORGANISATIONAL ISSUES

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

23. Is there a specific approach for:
    a. Brownfields?
    b. Megasites?
    c. Widespread pollutions?
    d. Reuse of excavated soils? (e.g., in relation to their quality)

24. Does your national policy include any accreditation system for consultants or service providers? If yes, please provide some details.

25. Do you have any training / capacity building programme, any management accountability and performance measurement?

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,)

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, …)?

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

Cleaning Up the Past, Building the Future: A National Brownfield Redevelopment Strategy for Canada
http://books.google.com/books?id=eRmebW6zlnEC&source=gbs_similarbooks

Ontario's Ministry of Municipal Affairs and Housing - Brownfields Redevelopment Resource Portal
http://www.mah.gov.on.ca/Page220.aspx

Ministry of the Environment - Ontario Regulation 153/04
http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_040153_e.htm

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The CCME is an inter-governmental organization in Canada with members from the federal government, the provincial governments and three territorial governments. Membership is at the Ministerial level and meetings typically occur at least annually to discuss national environmental priorities and determine work to be implemented through the CCME organization.